SANYO

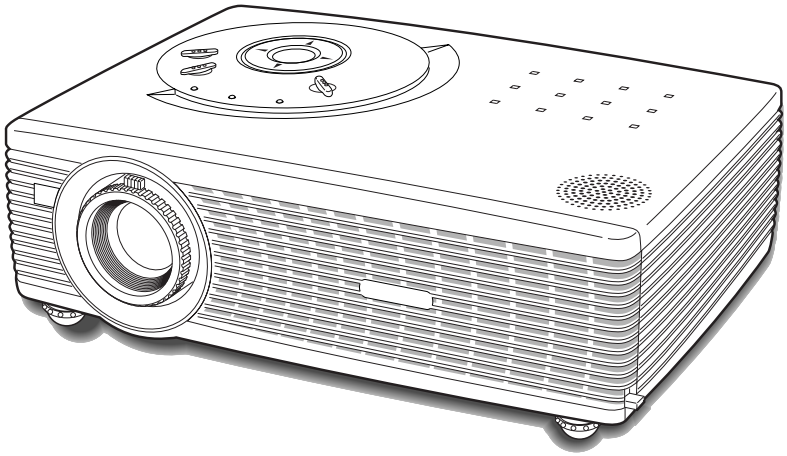
FILE NO.

# SERVICE MANUAL

**Multimedia Projector Model No. PLC-SW30**

U.S.A., Canada,
Europe, Asia, Africa

**Original Version**



**Chassis No. MP3-SW3000**

**NOTE:** Match the Chassis No. on the unit's back cover with the Chassis No. in the Service Manual.

**If the Original Version Service Manual Chassis No. does not match the unit's**, additional Service Literature is required. You must refer to "Notices" to the Original Service Manual prior to servicing the unit.

**PRODUCT CODE**
**1 122 223 00** (MP3A)
**1 122 226 00** (PP3A)
**1 122 226 02** (PP3C)

REFERENCE NO. SM5110522

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# ■ Safety Instructions

## SAFETY PRECAUTIONS

WARNING:
The chassis of this projector is isolated (COLD) from AC line by using the converter transformer. Primary side of the converter and lamp power supply unit circuit is connected to the AC line and it is hot, which hot circuit is identified with the line ( ⩩ ) in the schematic diagram. For continued product safety and protection of personnel injury, servicing should be made with qualified personnel.

The following precautions must be observed.

1: An isolation transformer should be connected in the power line between the projector and the AC line before any service is performed on the projector.

2: Comply with all caution and safety-related notes provided on the cabinet back, cabinet bottom, inside the cabinet or on the chassis.

3: When replacing a chassis in the cabinet, always be certain that all the protective devices are installed properly, such as, control knobs, adjustment covers or shields, barriers, etc.

DO NOT OPERATE THIS PROJECTOR WITHOUT THE PROTECTIVE SHIELD IN POSITION AND PROPERLY SECURED.

4: Before replacing the cabinet cover, thoroughly inspect the inside of the cabinet to see that no stray parts or tools have been left inside.

Before returning any projector to the customer, the service personnel must be sure it is completely safe to operate without danger of electric shock.

## PRODUCT SAFETY NOTICE

Product safety should be considered when a component replacement is made in any area of the projector. Components indicated by mark ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. It is, therefore, particularly recommended that the replacement of there parts must be made by exactly the same parts.

## SERVICE PERSONNEL WARNING

Eye damage may result from directly viewing the light produced by the Lamp used in this equipment. Always turn off Lamp before opening cover. The Ultraviolet radiation eye protection required during this servicing.
Never turn the power on without the lamp to avoid electric-shock or damage of the devices since the stabilizer generates high voltages(15kV - 20kV) at its starts.
Since the lamp is very high temperature during units operation replacement of the lamp should be done at least 45 minutes after the power has been turned off, to allow the lamp cool-off.

# ■ Specifications

| | |
|---|---|
| Projector Type | Multi-media Projector |
| Dimensions (W x H x D) | 10.63” x 3.07” x 7.48” (270mm x 78mm x 190mm) (not including Adjustable Feet) |
| Net Weight | 4.6 lbs (2.1 kg) |
| LCD Panel System | 0.5” TFT Active Matrix type, 3 panels |
| Panel Resolution | 800 x 600 dots |
| Number of Pixels | 1,440,000 (800 x 600 x 3 panels) |
| Color System | PAL, SECAM, NTSC, NTSC4.43, PAL-M and PAL-N |
| High Definition TV SIgnal | 480i, 480p, 575i, 575p, 720p, 1035i and 1080i |
| Scanning Frequency | H-sync. 15 ~ 80 kHz, V-sync. 50 ~ 100 Hz |
| Projection Image Size (Diagonal) | Adjustable from 34” to 200” |
| Projection Lens | F 1.6 ~ 1.8 lens with f 18.3 mm ~ 21.9 mm with manual zoom and focus |
| Throw Distance | 4.3’ ~ 21.2’ (1.3 m ~ 6.5 m) |
| Projection Lamp | 160 W |
| Video Input Jack | RCA Type x 1 (Video) and and Mini DIN 4 pin x 1 (S-Video) |
| AV Audio Input Jack | Mini Jack (stereo) x 1 |
| Computer Input Terminal | (VGA) HDB 15 Terminal x 1 |
| Computer Audio Input Jack | Mini Jack (stereo) x 1 |
| Control Port Connector | Mini DIN 8 pin x 1 |
| USB Connector | USB Series B receptacle x 1 |
| Internal Audio Amp | 0.8 W RMS |
| Build-in Speaker | 1 speaker, ø1.3" (32 mm) |
| Feet Adjustment | 0˚ to 8.0˚ |
| Voltage and Power Consumption | AC 100 ~ 120V (2.4A Max. Ampere), 50/60Hz (The U.S.A and Canada)<br>AC 200 ~ 240V (1.2A Max. Ampere), 50/60Hz (Continental Europe and The U.K.) |
| Operating Temperature | 41 ˚F ~ 95 ˚F (5˚C ~ 35˚C) |
| Storage Temperature | 14 ˚F ~ 140 ˚F (-10˚C ~ 60˚C) |
| Remote Control Unit | Wireless Remote Control, batteries AAA, SUM-04 or R03 type x 2<br>Presentation Remote Control, batteries AAA, SUM-04 or R03 type x 2<br>Presentation Remote Receiver |

● The specifications are subject to change without notice.

c UL us LISTED

This symbol on the nameplate means the product is Listed by Underwriters Laboratories Inc. It is designed and manufactured to meet rigid U.L. safety standards against risk of fire, casualty and electrical hazards.

CE

The CE Mark is a Directive conformity mark of the European Community (EC).

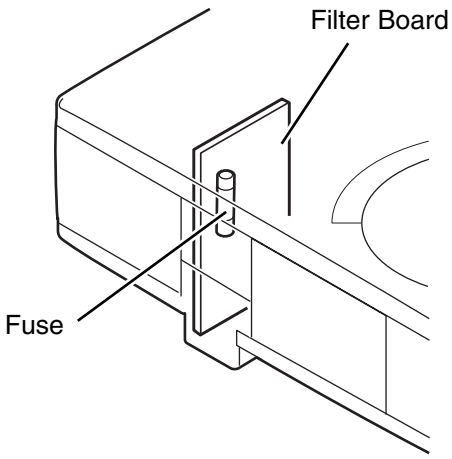
# ■ Circuit Protections

This projector provides the following circuit protections to operate in safety. If the abnormality occurs inside the projector, it will automatically turn off by operating one of the following protection circuits.

## ● Fuse

A fuse is located inside of the projector. When the POWER indicator is not lightning, the fuse may be opened. Check the fuse as following steps.
The fuse should be used with the following type;

**Fuse Part No.: 423 022 2102**
**TYPE T4.0AH 250V FUSE**
**LITTEL FUSE INC. TYPE 215004**

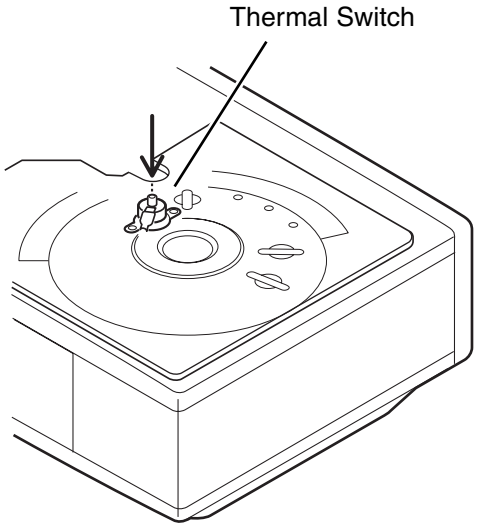



### How to replace the fuse

**1.** Remove the cabinet top following to “Mechanical Disassemblies”.
**2.** Remove the cover on the Filter Board.
**3.** Remove fuse from fuse holder.
To install the fuse, take reversed step in the above.

## ● Thermal switch

There is the thermal switch (SW902) inside of the projector to prevent the internal temperature rising abnormally. When the internal temperature reaches near 100˚C, turn off the AC main power supply automatically.
The thermal switch is not reset to normal automatically even if the internal temperature becomes normal. Reset the thermal switch following procedure.
Check the resistance between terminals of thermal switch by using the tester. If it has high impedance, thermal switch may be in operative.



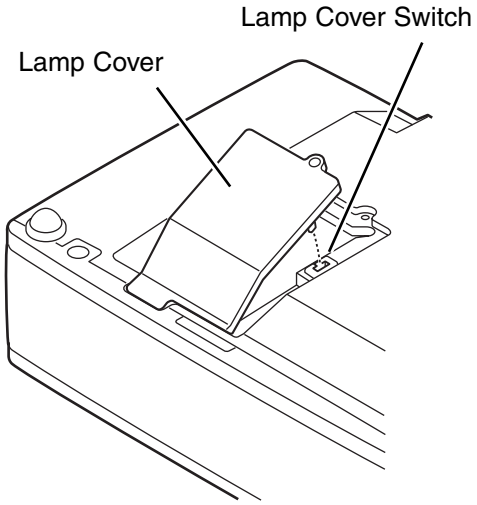

### How to reset the thermal switch

**1.** Remove the cabinet top following to “Mechanical Disassemblies”.
**2.** Press the reset button on the thermal switch with a sharp-pointed tool.

**CAUTION:**
Before press the reset button, make sure that the AC cord must be disconnected from the AC outlet.

## ● Lamp cover switch

The lamp cover switch (SW8801) cuts off the drive signal to the lamp circuit when the lamp cover is removed or no close completely. After opening the lamp cover for replacing the lamp ass’y, place the lamp cover correctly otherwise the projector can not turn on.



## ● Warning temperature and power failure protection

The WARNING indicator flashes red and the projector will automatically turn off when the internal temperature of the projector exceeds the normal temperature or when stopping cooling fans or when the internal power supply lines are failed.

Check the following possible causes and wait until stopping the WARNING indicator flashing.

### Possible causes

- Air filter is clogged with dust particles. Remove dust from the air filter by following instructions in the “Air filter care and cleaning” below.
- Ventilation slots of the projector are blocked. In such an event, reposition the projector so that ventilation slots are not obstructed.
- Check if projector is used at higher temperature place (Normal operating temperature is 5 to 35 ˚C or 41 to 95˚F)

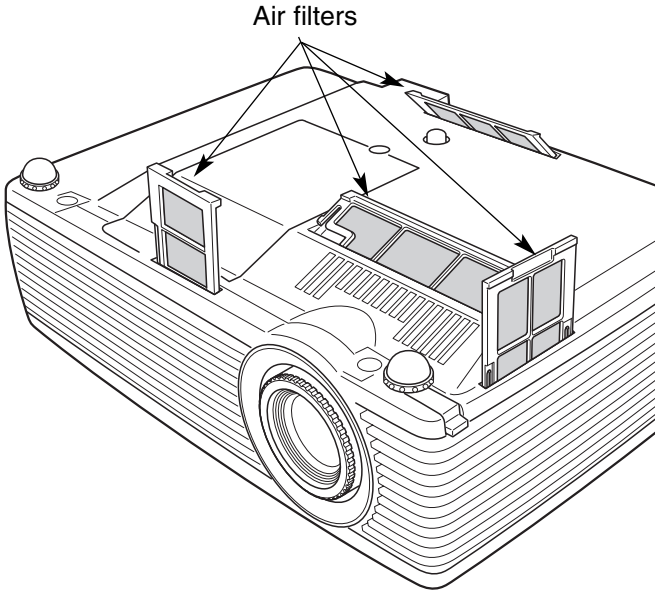
If the WARNING indicator still continues to flash, there may be defects on cooling fans or power supply circuits. Please check fan operation and power supply lines referring to the “Power Supply Lines Chart”.

### Air filter care and cleaning

The removable air filter prevents dust from accumulation on the surface of the projection lens and projection mirror. Should the air filters become clogged with dust particles, it will reduce the cooling fan’s effectiveness and may result in internal heat build up and adversely affect the life of the projector.

To clean up the air filters, follow the cleaning procedure below:

1. Turn the projector off, and disconnect the AC power cord from the AC outlet.
2. Turn the projector upside down and remove the air filters by pulling the latches upward.
3. Clean the air filters with a brush or wash out dust and particles.
4. Replace each air filter properly. Make sure that the air filters are fully inserted.




### CAUTION:

Do not operate the projector with the air filters removed. Dust may accumulate on the LCD panel and the mirror, and it may spoil the fine picture image.
Do not put the small parts into the air intake vents. It may result in the malfunction of the projector. The air filter is small parts. Take care that children don’t eat or swallow it.

### RECOMMENDATION

We recommend avoiding dusty, smoky environments when operating the projector. Usage in these environments may cause poor image quality.
When using under dusty or smoky conditions, dust may accumulate on optical elements inside the projector. The condition may degrade the quality of a projected image.
When the above symptoms are noticed, please clean up the LCD panel and lens following to the “Cleaning Method”.

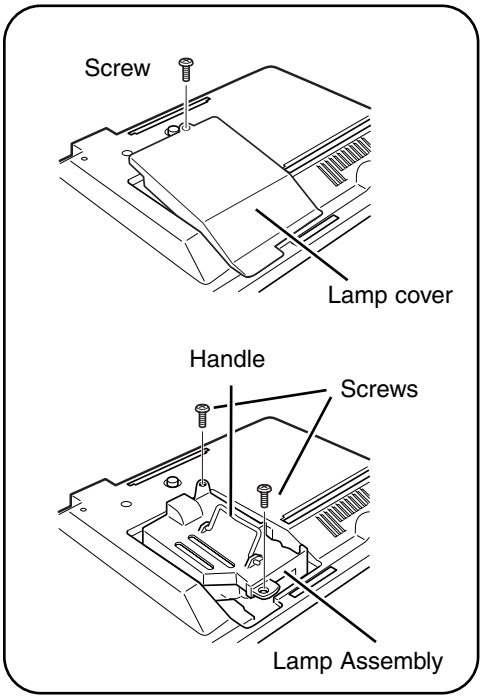

-6-

# ■ Lamp Replacement

**WARNING:**
- Allow a projector to cool, for at least 45 minutes before you open Lamp Cover. The inside of a projector can become very hot.
- For continued safety, replace with a lamp assembly of the same type.
- Do not drop a lamp assembly or touch a glass bulb! The glass can shatter and may cause injury.

**ORDER REPLACEMENT LAMP**

| Type No. | Service Parts No. |
|---|---|
| POA-LMP57 | 610 308 3117 |




**Procedure**

**1** Turn off the projector and disconnect the AC plug. Allow the projector to cool at least for 45 minutes.
**2** Remove 1 screw and remove the lamp cover.
**3** Remove 2 screws and pull out the lamp assembly by grasping the handle.
**4** Replace the lamp assembly securely and tighten 2 screws.
**5** Close the lamp cover and tighten 1 screw.
**6** Connect the AC Power Cord to the projector and turn on the projector.

**7 Reset the Lamp Replace Counter, see below explanation**.

**Note:**
- Do not reset the Lamp Replace Counter, except after lamp is replaced.
- The projector can not be turned-on with lamp cover removed, because when the lamp cover is removed, the lamp cover switch is also released to switch off the mains power for safety.

## How to reset Lamp Replace Counter

**1** Turn the projector on, and press the **MENU** button and the on-screen menu will appear. Press the **POINT LEFT/RIGHT** buttons to move the red frame pointer to the Setting Menu icon.
**2** Press the **POINT DOWN** button to move the red frame pointer to "Lamp counter reset" and then press the **SELECT** button. The message "Lamp replace counter reset?" is displayed. Move the pointer to [Yes] and then press the **SELECT** button.
**3** Another confirmation dialog box appears and select [Yes] to reset Lamp Replace Counter .

Please refer to the owners manual for further information.

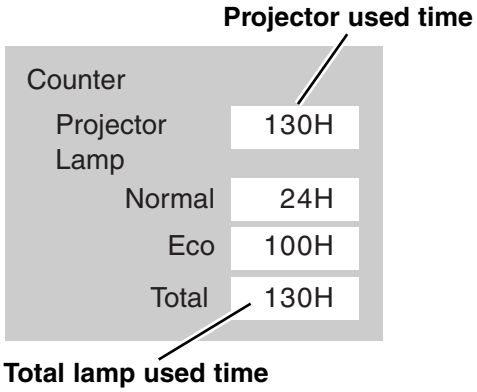
## Recommendation

Should the air filter become clogged with dust particles, it will reduce the cooling fan's effectiveness and may result in internal heat build up and short lamp life. We recommend cleaning the air filter after the projection lamp is replaced.
Refer to "Air Filter Cleaning".

## How to check Lamp used time

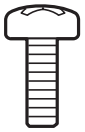
The LAMP REPLACE indicator will light yellow when the total lamp used time reaches 2000 hours. This is to indicate that lamp replacement is required.
The total lamp used time is calculated by using the below expression;
Total lamp used time = **T**eco + **T**nomal (1+1/4)
**T**eco : used time in the Eco mode
**T**normal : used time in the Normal and Auto mode

You can check the lamp replace counter following to below procedure.
**1** Press and hold the **POWER ON-OFF** button on the projector or the remote control unit for more than 20 seconds.
**2** The projector used time and lamp used time will be displayed on the screen briefly.



# ■ Mechanical Disassemblies

Mechanical disassemble should be made following procedures in numerical order.
Following steps show the basic procedures, therefore unnecessary step may be ignored.
**Caution:**
The parts and screws should be placed exactly the same position as the original otherwise it may cause loss of performance and product safety.

| Screws Expression (Type Diameter x Length) mm | |
|---|---|
| T type | M Type |
| |  |

## 1 Cabinet Top removal

**1** Remove the Air Filter in the side of the set at first.
(If not, the filter would be broken.)
**2** Remove 4 screws **A** (M3x6) and 1 screw **B** (M3x8), and then take the Cabinet Top upward off.

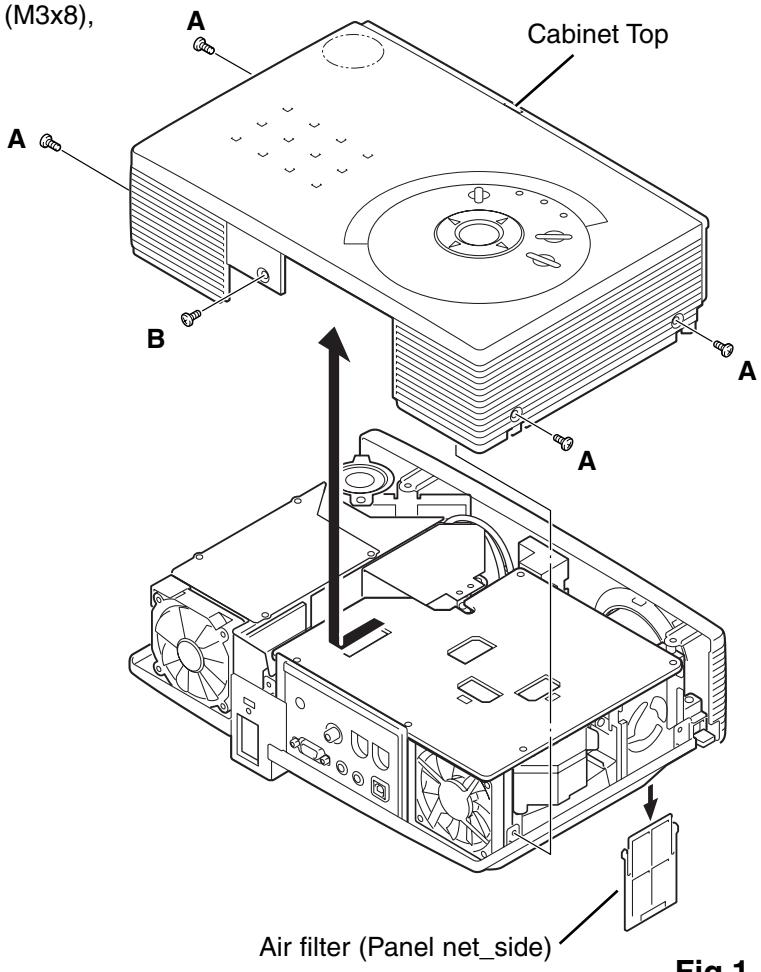



**Fig.1**

## 2 Cabinet Front and R/C Board removal

**1** Remove 2 screws **A** (M3x6) and 2 screws **B** (M3x6 black) to take the Cabinet Front off.
**2** Remove 1 screw **C** (T3x6) to the R/C Board on the Cabinet Front.

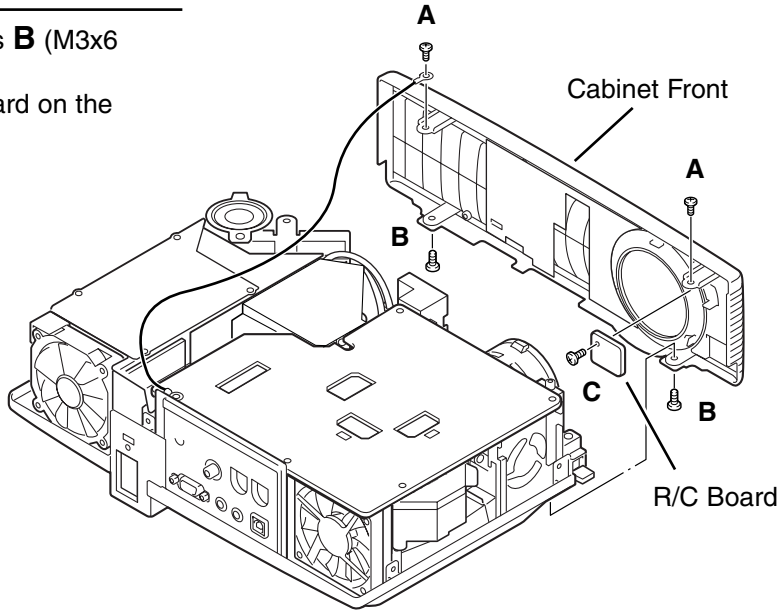



**Fig.2**

## 3 Main Board removal

**1** Remove 4 screws (M3x6) to take the Main Board upward.

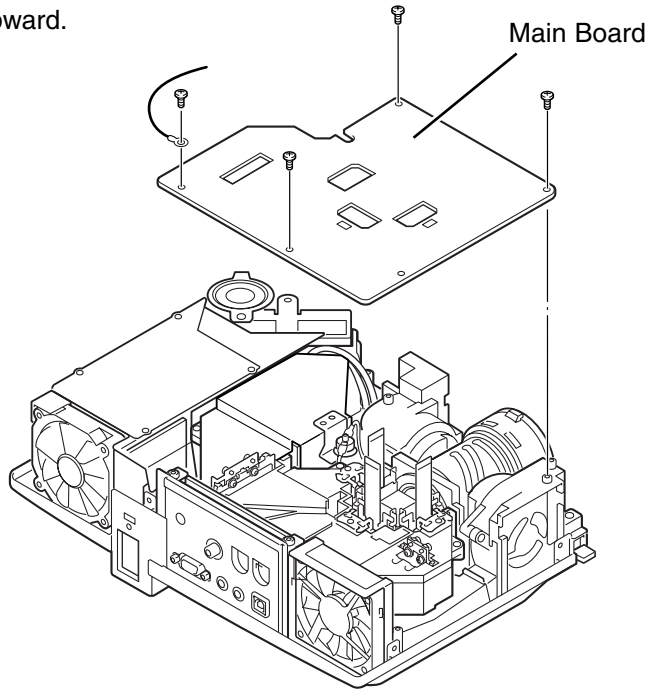



**Fig.3**

## 4 Rear Panel, AV Board and FN903 removal

**1** Remove 1 screw **A** (M4x4) and take the Rear Panel ass'y upward off.
**2** Remove 2 screws **B** (T3x8) to take the fan (FN903) off.
**3** Remove 4 screws **C** (T3x6) and take AV Board from the Rear Panel ass'y off.

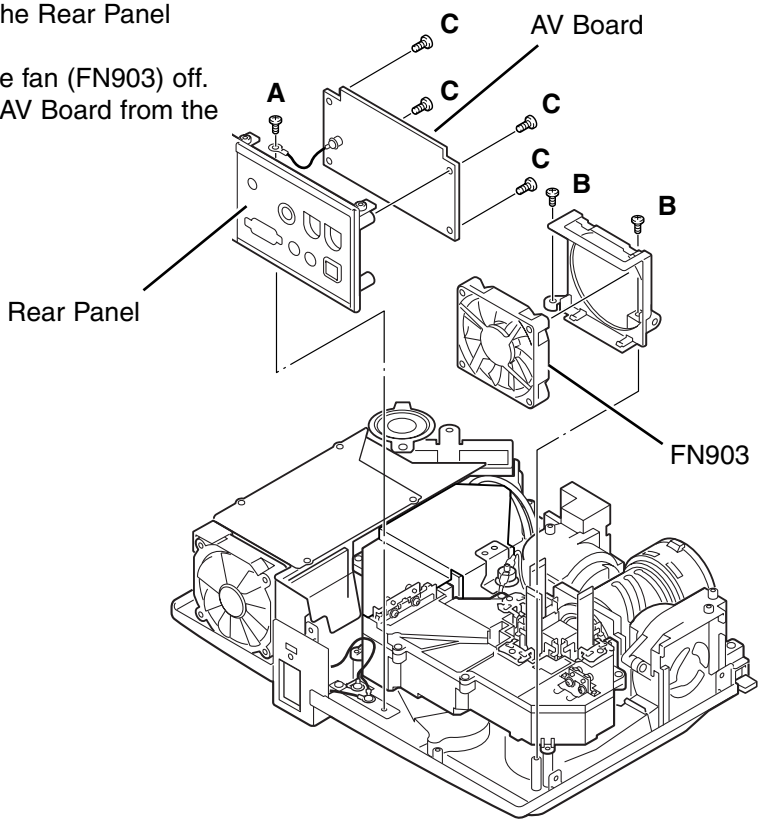



**Fig.4**

## 5 Thermal SW removal

**1** Remove 1 screw (M3x6) to take the Thermal Switch (SW902) and the Cover Spacer off.

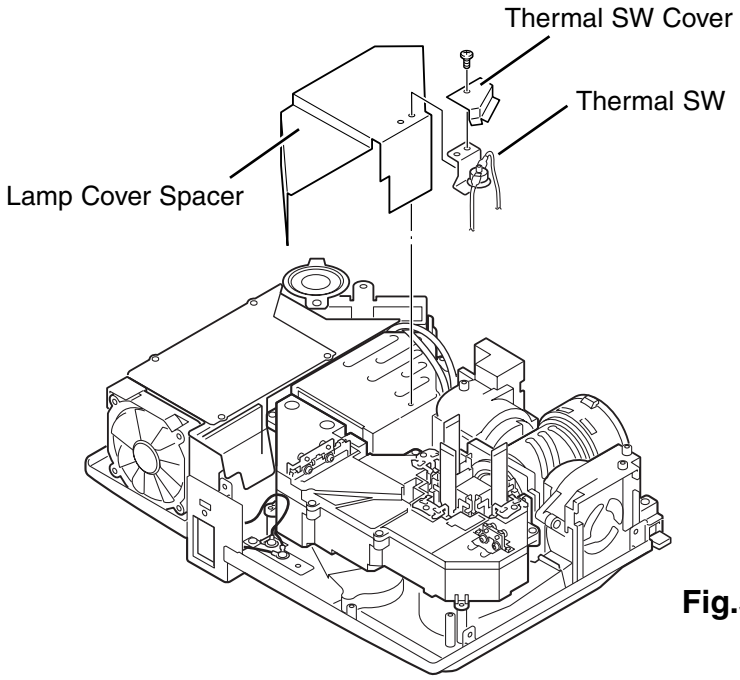



**Fig.5**

## 6 Optical Unit removal

**1** Remove 2 screws **A** (M3x8) and take the Lamp Cable off.
**2** Remove 6 screws **B** (T3x10) and take the Optical Unit upward off.

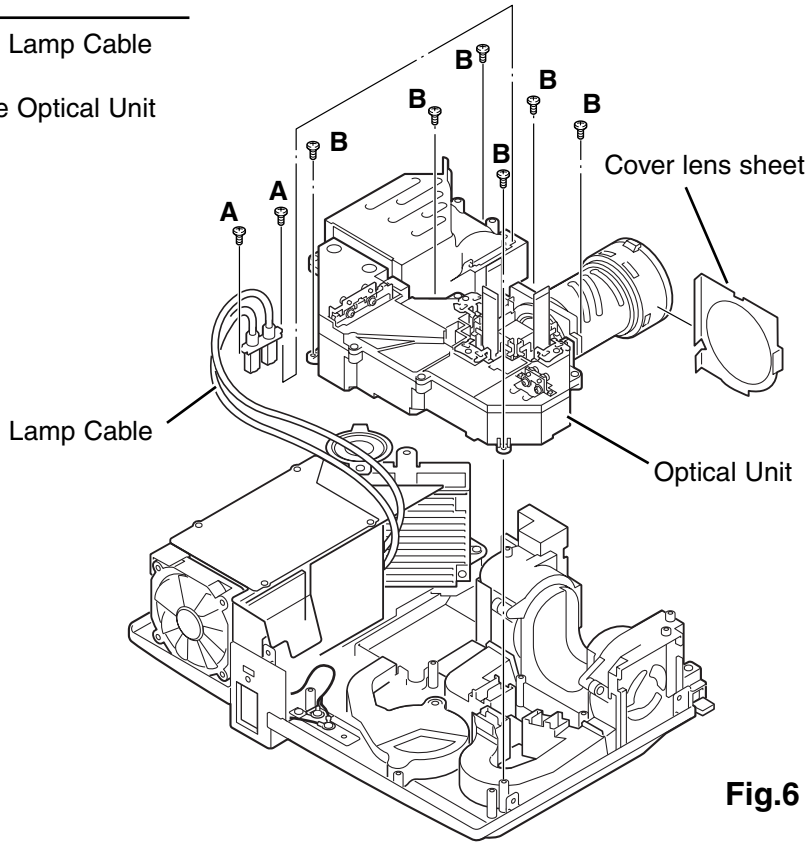



**Fig.6**

## 7 Power Unit, Speaker and FN906 removal

**1** Remove 4 screws **A** (T2x4) to take off the spacer sheet and the shield plate on the Power Board.
**2** Remove 1 screw **B** (M3x8) to take the Speaker(SP901) off.
**3** Remove 2 screws **C** (T3x8) and 1 screw **D** (M4x4) to take the Power Unit and the Fan(FN906) off.
**4** Take the Fan(FN906) from the Holder by pulling it.
**5** Remove 3 screws **E** (T3x6) to take the Power Unit off.

Notes:
You can remove the connectors on the Power Unit after the Lamp Ballast Unit removal.

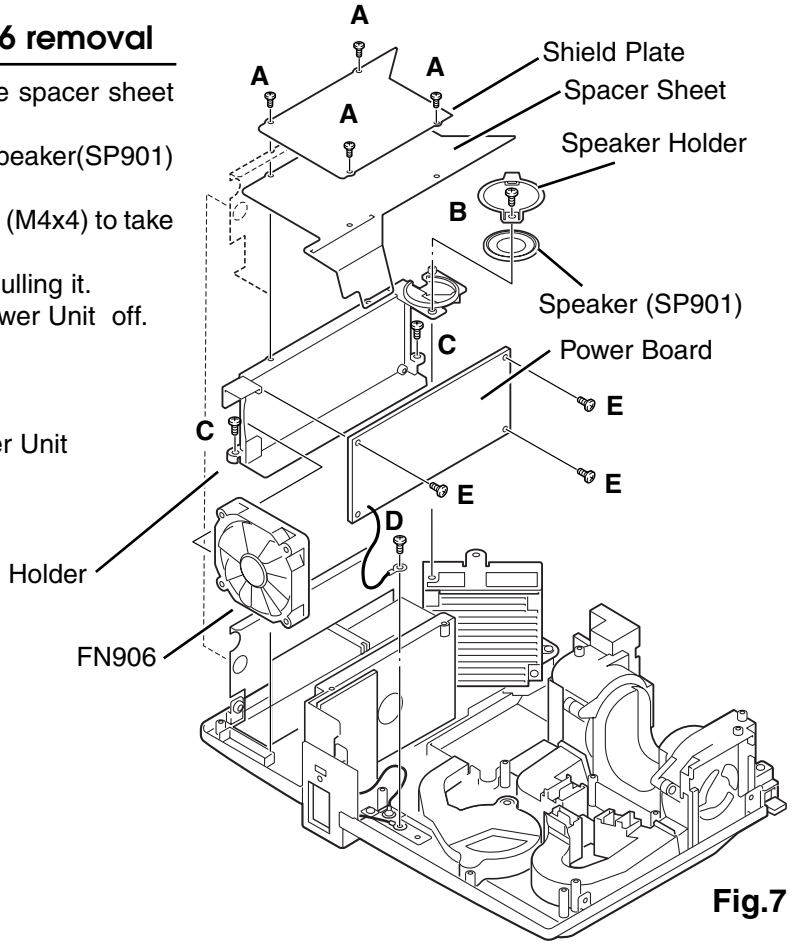



**Fig.7**

## 8 Lamp Ballast Unit and Filter Board removal

**1** Remove 1 screw **A** (M4x4) to take the Earth cable off.
**2** Remove 2 screws **B** (T3x8) to take the Lamp Ballast Unit and the Filter Board off.
**3** Remove 2 screws **C** (T3x6) to take the Lamp Ballast Unit off.
**4** Remove 3 screws **D** (T3x6) to take the Filter Board off.

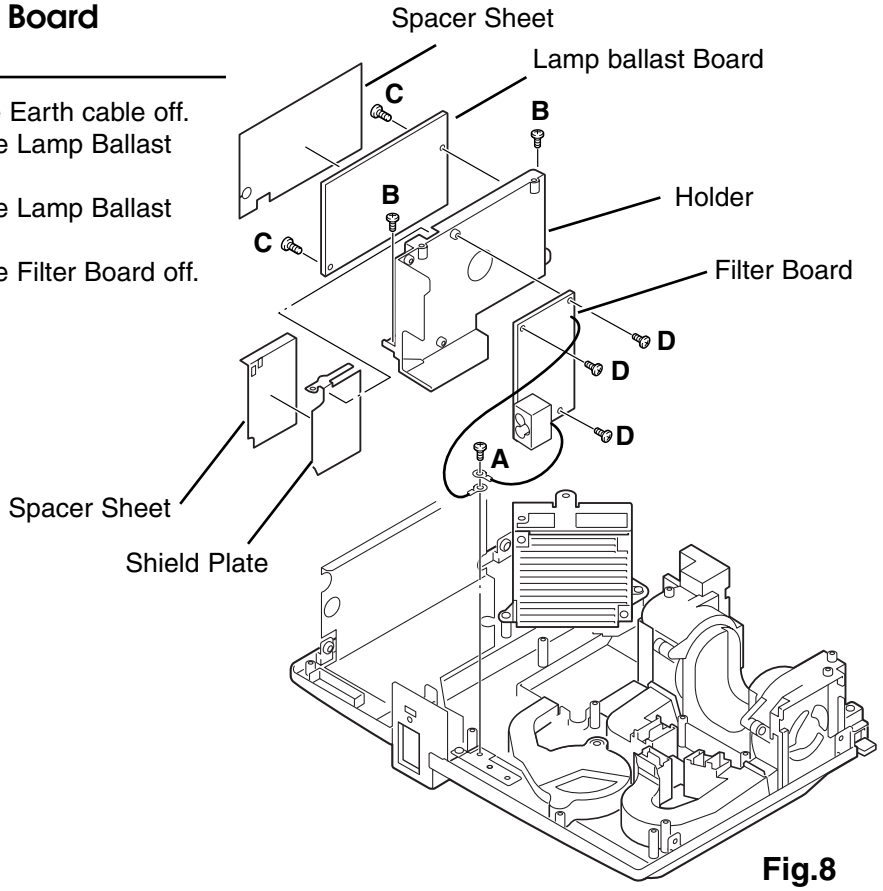



**Fig.8**

## 9 FN904 removal

**1** Remove 2 screws **A** (T3x8) to take the Fan (FN904) ass'y off.
**2** Remove 2 screws **B** (M3x30) to take the Fan (FN904) off from the Fan mounting base.

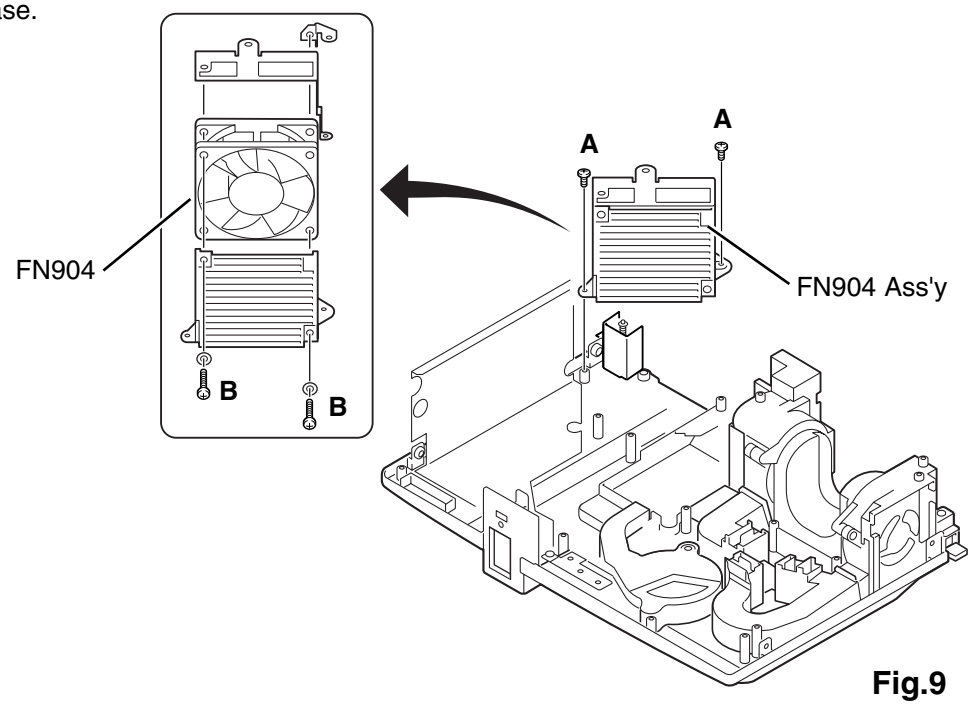



**Fig.9**

## 10 FN902, FN905 and Sensor Board removal

**1** Remove 1 screw **A** (T3x8) to take the Duct under the Panel.
**2** Remove 1 screw **B** (T3x8) to take the Holder with the Fans(FN902 and FN905) off.
**3** Remove 2 screws **C** (T3x10) to take the Fans (FN902 and FN905) off.
**4** Remove 1 screw **D** (T3x6) to take the Sensor Board off.

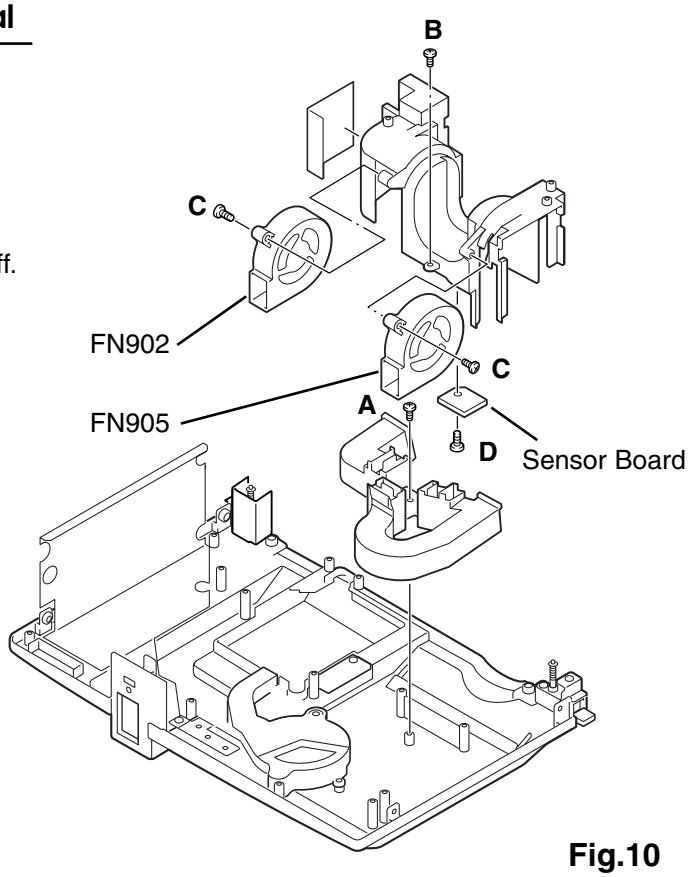



**Fig.10**

## 11 FN901 and Lamp Cover SW removal

**1** Remove 1 screws **A** (T4x4) to take the shield plate off.
**2** Remove 2 screws **B** (T3x8) to take the Fan (FN901) and the duct off.
**3** Remove 2 screws **C** (T3x8) to take the SW Board and the spring off.

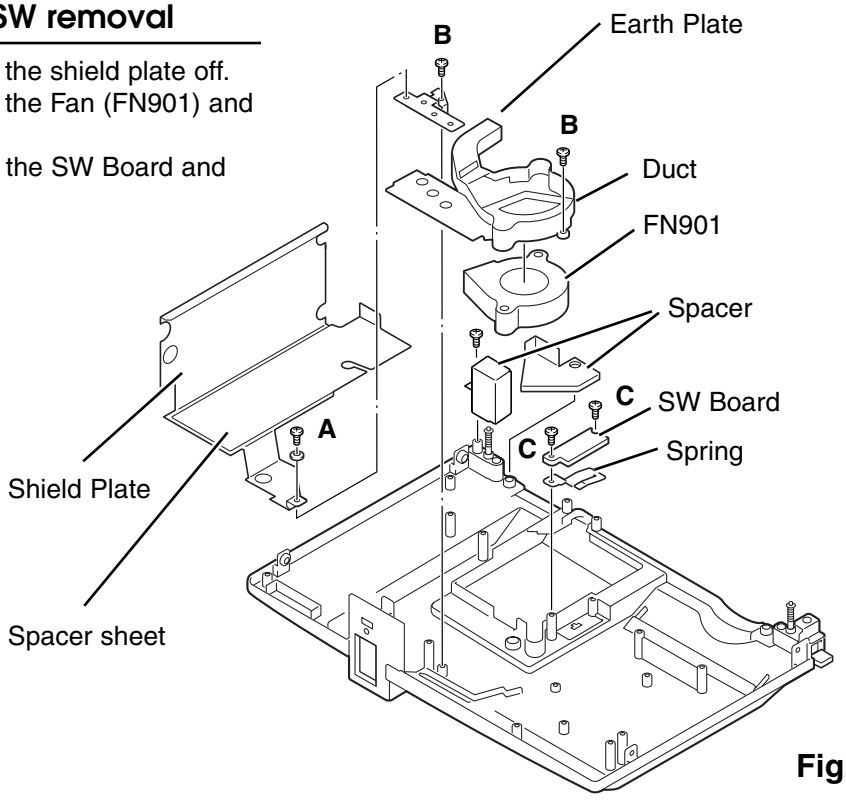



**Fig.11**

# ■ Optical Parts Disassemblies

Before taking this procedure, remove Cabinet Top, Main Board and Optical Unit following to the “Mechanical Disassemblies”.

## 1 Lamp Holder removal

**1** Remove 4 screws to take the Lamp Holder off.

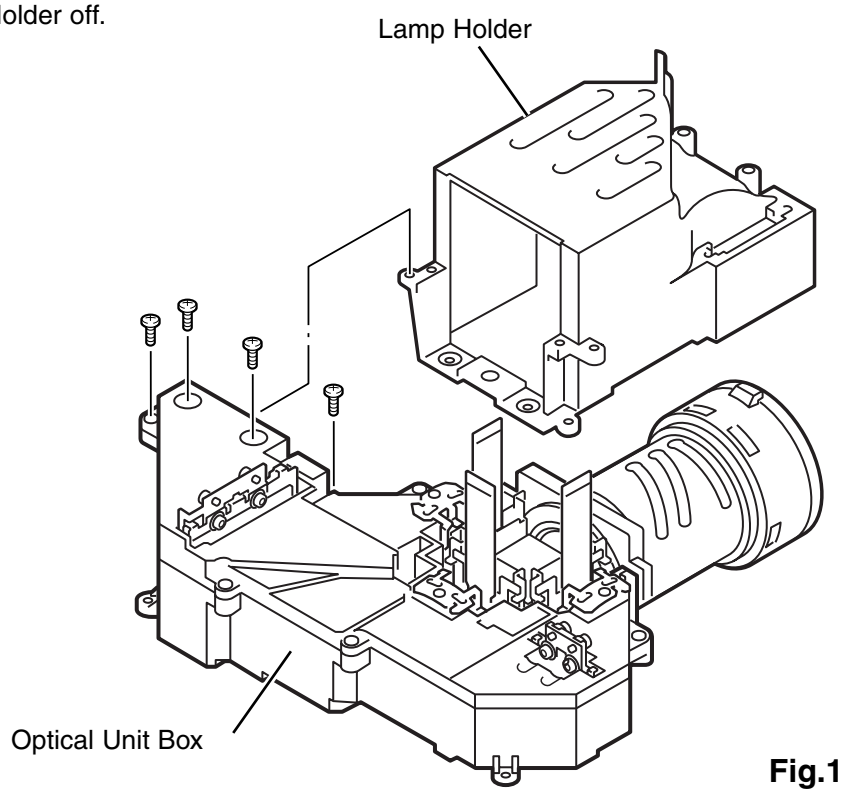



**Fig.1**

## 2 Projection Lens Ass'y removal

**1** Remove 3 screws to take the Projection Lens ass'y off.

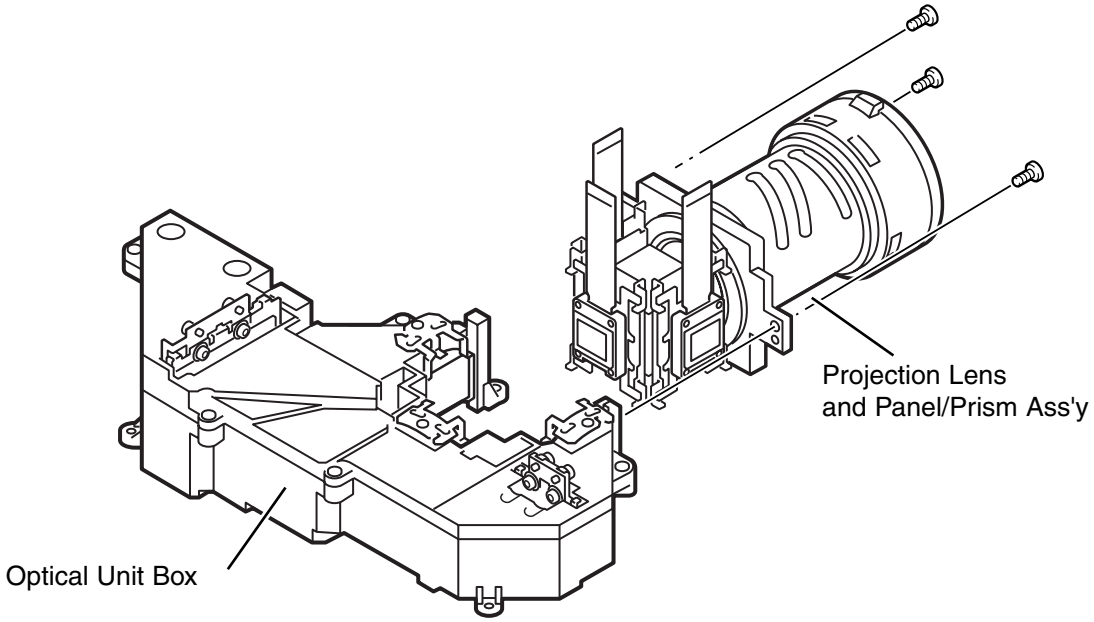
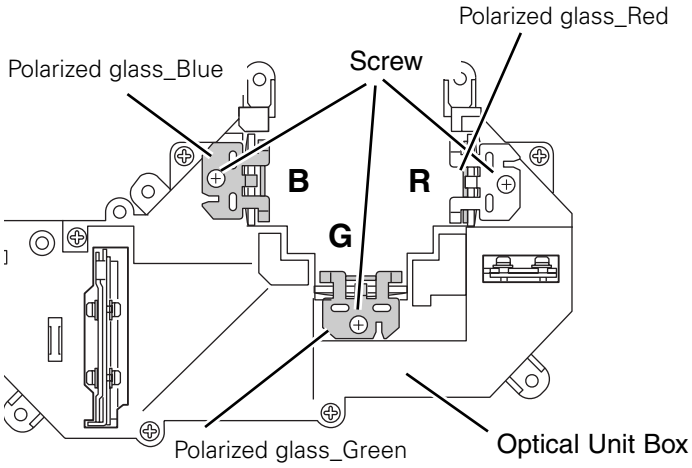



**Fig.2**

## 3 Polarized Glass-In removal

**1** Remove each screw to take the polarized glass-in R/G/B off.

Note:
The polarized glass-in_red is sticked on the condenser lens_red. So, it cannot be removed separately.



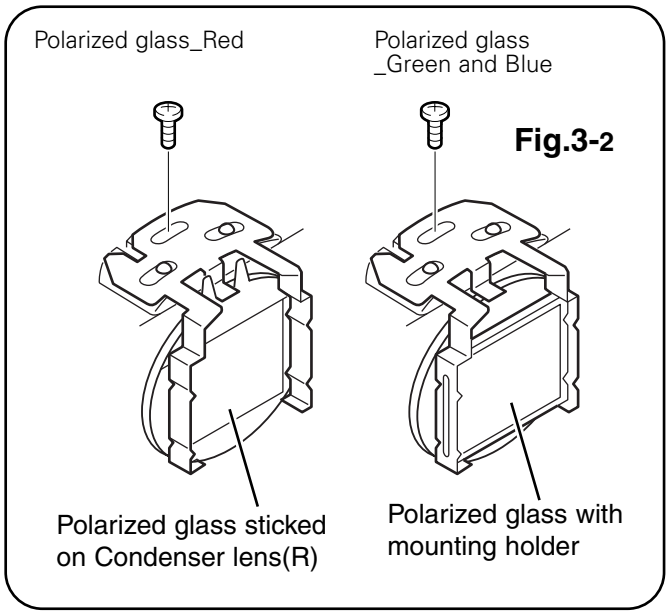


Polarized glass_Red
Polarized glass _Green and Blue
Polarized glass sticked on Condenser lens(R)
Polarized glass with mounting holder

**Fig.3-2**

**Fig.3-1**

## 4 Optical Unit Top removal

**1** Remove 6 screws to take the Optical unit top off.

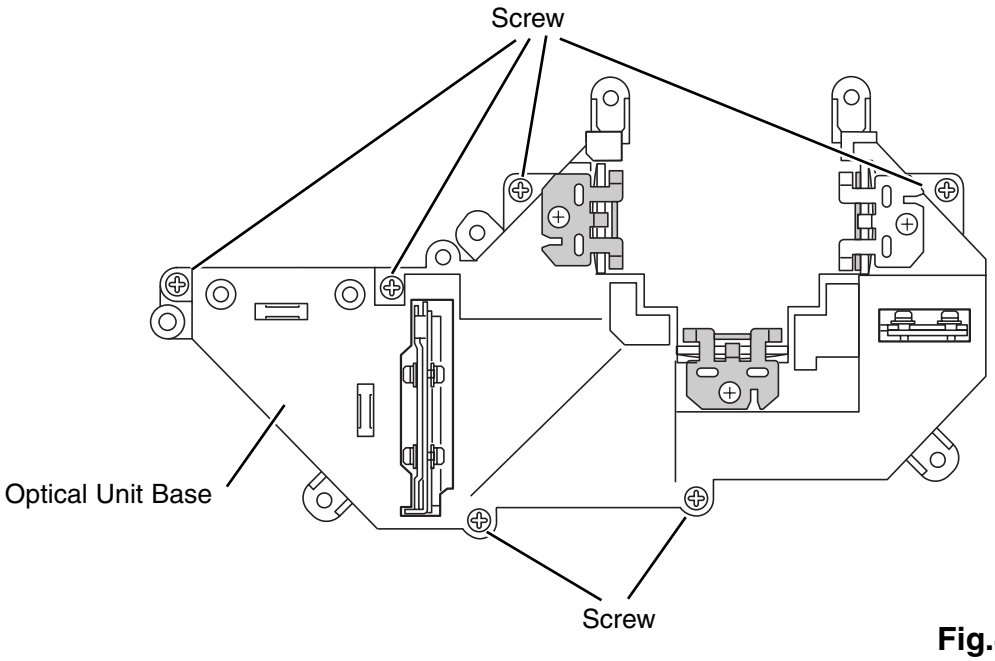



**Fig.4**

## Locations and Directions

When the optical parts in the optical unit mounting or assembling, the parts must be mounted in the specified location and direction as shown in figure below.

| Key No. | Description |
|---|---|
| 1 | Integrator lens (IN) |
| 2 | Mirror (W) |
| 3 | Integrator lens (OUT) |
| 4 | PBS (polarizing beam splitter) |
| 5 | Condenser lens (IN) |
| 6 | Dichroic mirror (B) |
| 7 | Dichroic mirror (G) |
| 8 | Relay lens (IN) |
| 9 | Mirror (R) |
| 10 | Relay lens (OUT) |
| 11 | Condenser lens (R) |
| 12 | Condenser lens (G) |
| 13 | Condenser lens (B) |
| 14 | Mirror (B) |

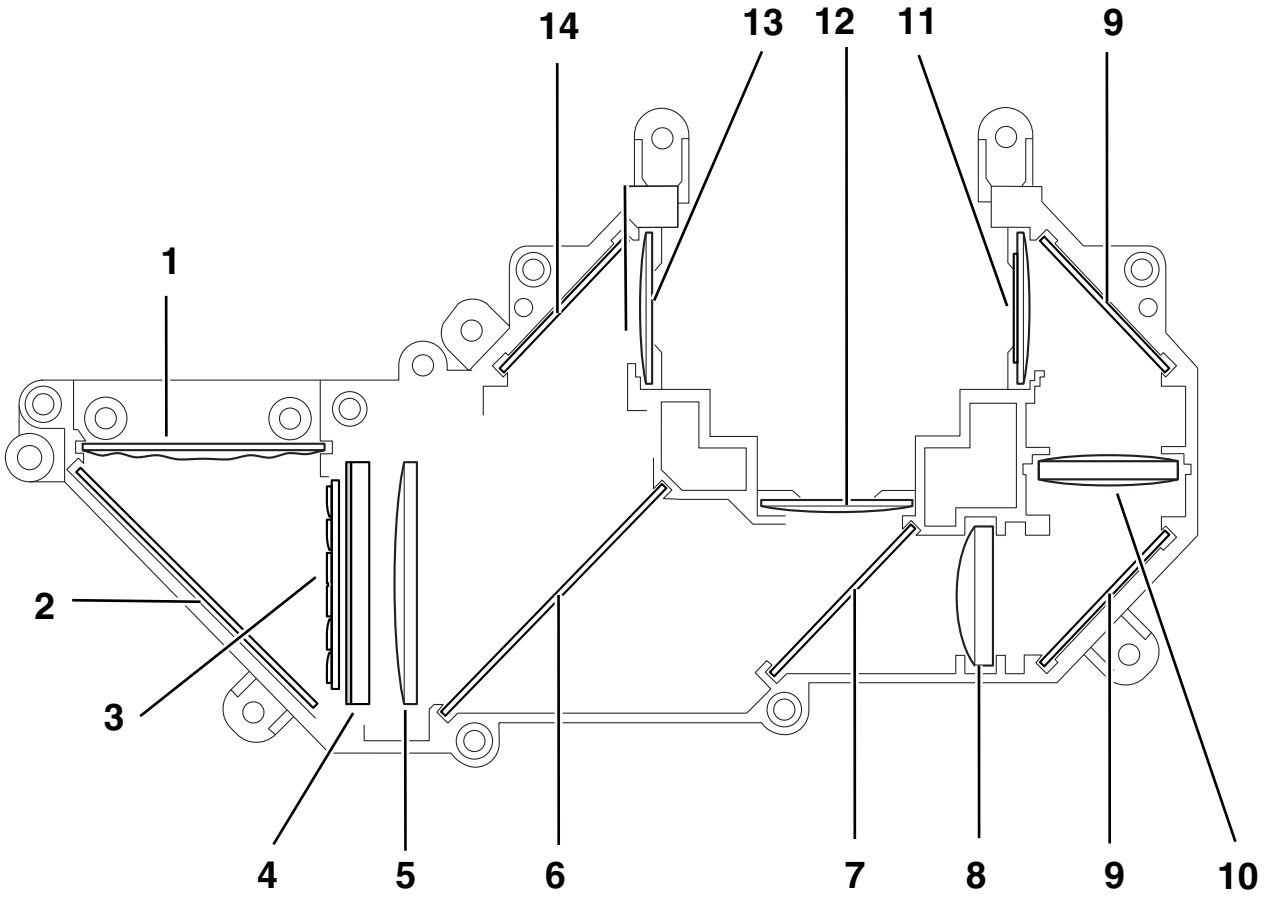



**Fig.5**

# ■ LCD Panel/Prism Ass'y Replacement

## 1 LCD Panel/Prism Ass'y removal

**1** Remove 4 screws to take the Projection Lens off.

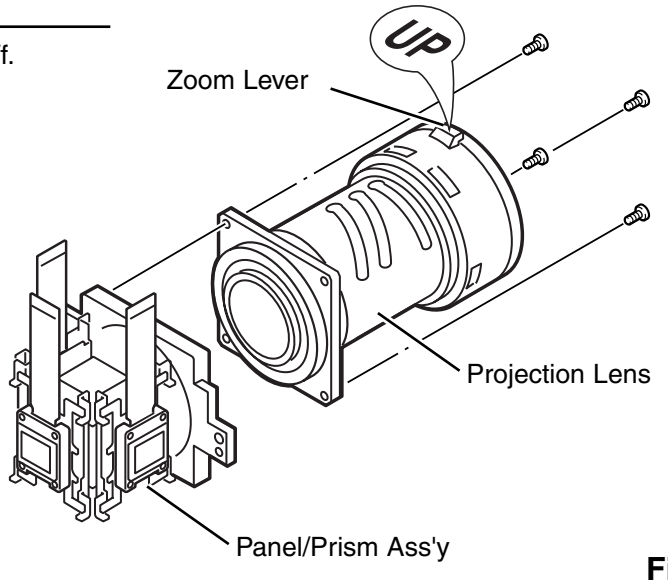



**Fig.1**

## 2 LCD Panel/Prism Ass'y attachment

**1** Tighten 4 screws to fix the Projection Lens securely, making sure that the zoom lever is upside.

Note:
Do not replace the LCD panel separately otherwise it can not obtain proper picture.
Do not touch the prism, the LCD panel and the electrode of flexible cable.

**IMPORTANT NOTICE on LCD Panel/Prism Ass'y Replacement**

LCD panels used for this model can not be replaced separately. Do not disassemble the LCD Panel/Prism Ass'y. These LCD panels are installed with precision at the factory. When replacing the LCD panel, should be replaced whole of the LCD panels and prism ass'y at once.

After replacing LCD Panel/Prism ass'y, please check the following adjustments.

- Check the "Condenser Lens Adjustment" and "Relay Lens Adjustment" following to chapter "Optical Adjustment".
- Check the "White Balance Adjustment" and "Common Centre Adjustment" following to chapter "Electrical Adjustment".
- Check the white uniformity on the screen.
  If you find the color shading, please adjust the white uniformity by using the proper computer and "Color Shading Correction" software supplied separately. The software can be ordered as follows;

**COLOR SHADING CORRECTION Ver. 3.0**
Service Parts No. 645 056 6288

# ■ Adjustments after Parts Replacement

● : Adjustment necessary ❍ : Check necessary

| | | Disassembly / Replaced Parts | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | LCD/ Prism Ass'y | Optical Unit | | Polarized glass | | | | Power Board | Main Board |
| | | | | | R(✻) | G | B | | | |
| Optical Adjustments | Contrast Adjustment | | | | | | | | | |
| | R-Contrast adjustment | | ❍ | | ● | | | | | |
| | G-Contrast Adjustment | | ❍ | | | ● | | | | |
| | B-Contrast adjustment | | ❍ | | | | ● | | | |
| | Condenser lens adjustment | ❍ | ❍ | | | | | | | |
| | Relay lens adjustment | ❍ | ❍ | | | | | | | |
| | | | | | | | | | | |
| Electrical Adjustments | PC pedestal adjustment | | | | | | | | | ● |
| | PC gain adjustment | | | | | | | | | ● |
| | Video gain adjustment | | | | | | | | | ● |
| | 480p pedestal adjustment | | | | | | | | | ● |
| | 480p gain adjustment | | | | | | | | | ● |
| | 480i gain adjustment | | | | | | | | | ● |
| | Gamma adjustment (PC and AV) | | | | | | | | | ● |
| | Common center adjustment | ● | | | | | | | | ● |
| | White balance adjustment (PC and AV) | ❍ | | | | | | | | ❍ |
| | | | | | | | | | | |

Note(✻): The polarized glass(R) is sticked on the condenser lens(R).

# ■ Optical Adjustments

Before taking optical adjustments below, remove the Cabinet Top and Main Board following to the “Mechanical Disassemblies”
Adjustments require a plus screwdriver, 2.0mm hex wrench and a slot screwdriver.
Note: Do not disconnect connectors **K8A**, **K8B**, **K8H**, **K48K**, **K48L**, **K66A**, **K66B**, **K66C**, **K66D**, **K66E** and **K66F** on the main board, because the projector can not turn on due to operate the power failure protection.

## Contrast adjustment

**[Before Adjustment]**
- Input a 100% of black raster signal.

### [R/G/B-CONTRAST ADJUSTMENT]

**1** Loosen a screw **A** (**Fig.1-1/1-2**) on the polarized glass mounting base which you intend to adjust.
**2** Turn the polarized glass mounting base as shown in **Fig.1-1** to obtain the darkest brightness on the screen.
**3** Tighten the screw **A** to fix the polarized glass mounting base.

Repeat steps 1 to 3 for remaining polarized glasses.

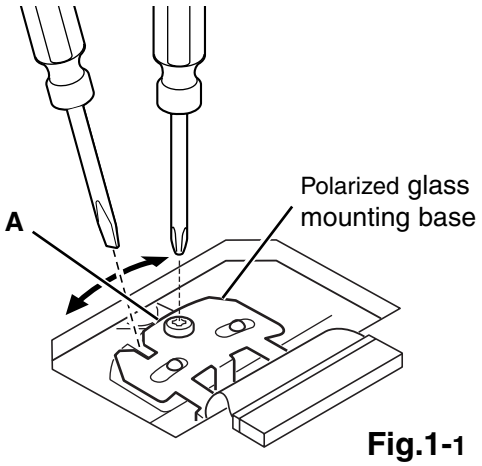



**Fig.1-1**

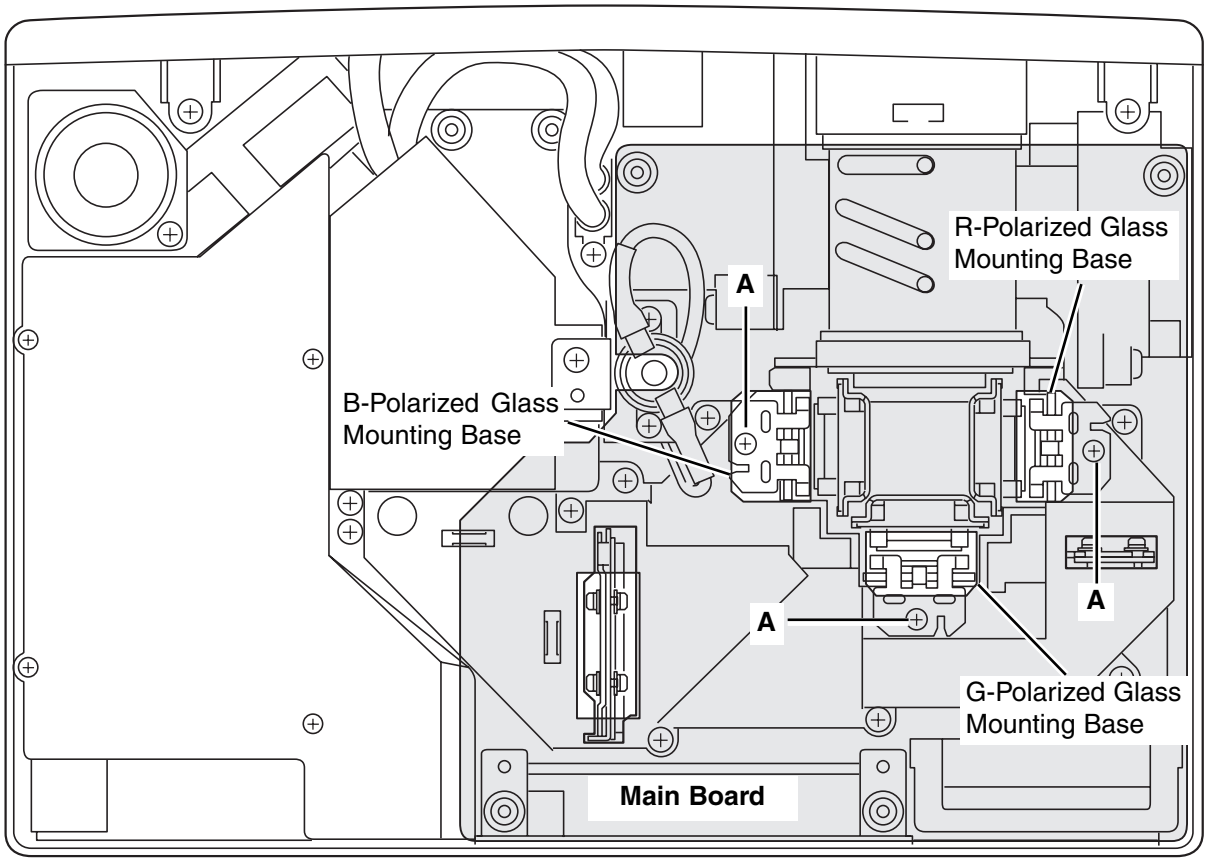



**Fig.1-2**

## Condenser Lens adjustment

**1** Turn the projector on by a state of without FPC cables.

**2** Adjust the adjustment base of condenser lens ass'y to make color uniformity in white.

1) If the shading appears on the left or right of the screen as shown in **Fig.2-1**, loosen 2 screws **A** with the 2.0mm hex driver, and adjust the slot **B** to make color uniformity in green by using a slot screwdriver.
2) If the shading appears on the top or bottom of the screen as shown in **Fig.2-2**, loosen 2 screws **C** with the 2.0mm hex driver, and adjust the slot **D** to make color uniformity in green by using a slot screwdriver

**3** Tighten screws **A** and **C** to fix the Condenser lens unit.

Note:
The relay lens adjustment must be carried out after completing this adjustment.

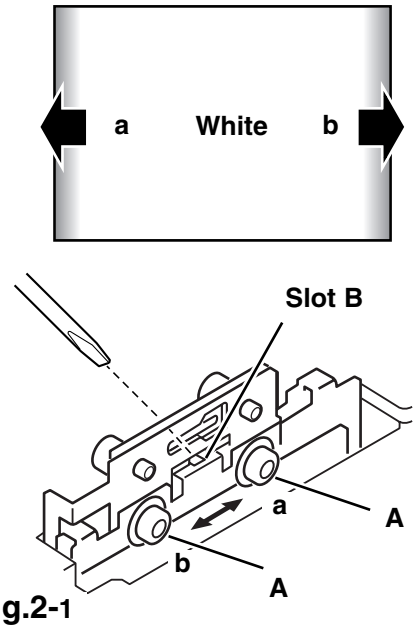
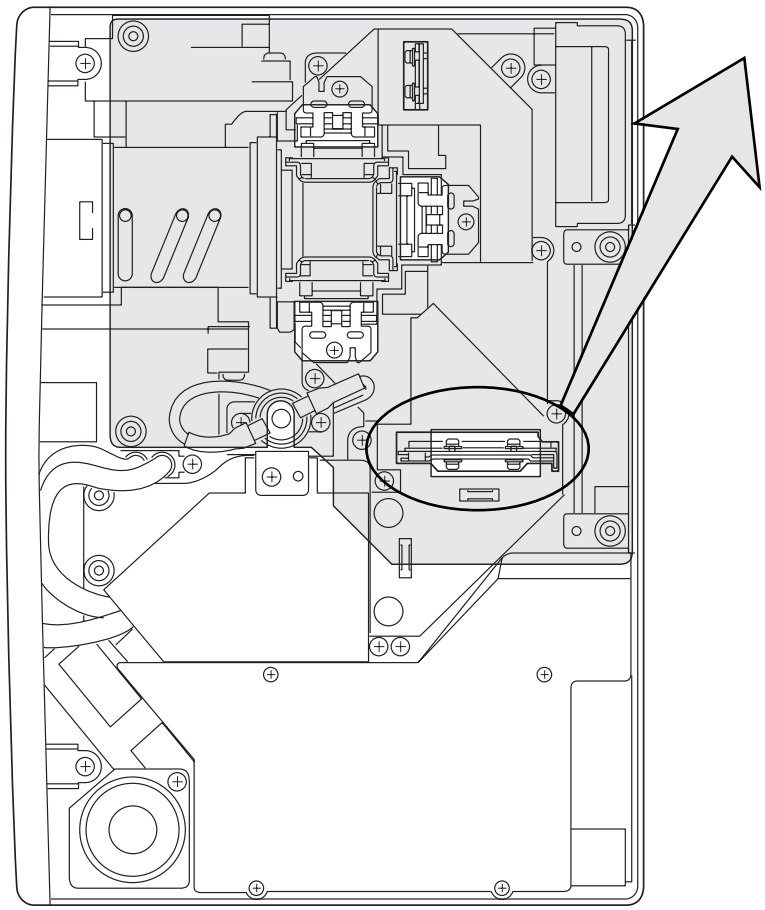



**Fig.2-1**
**Moving of slot B**



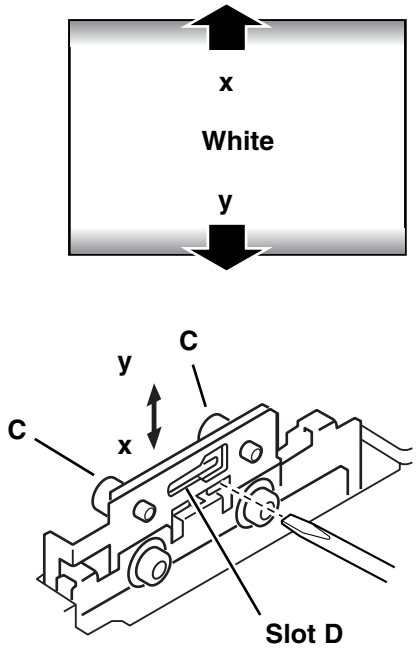
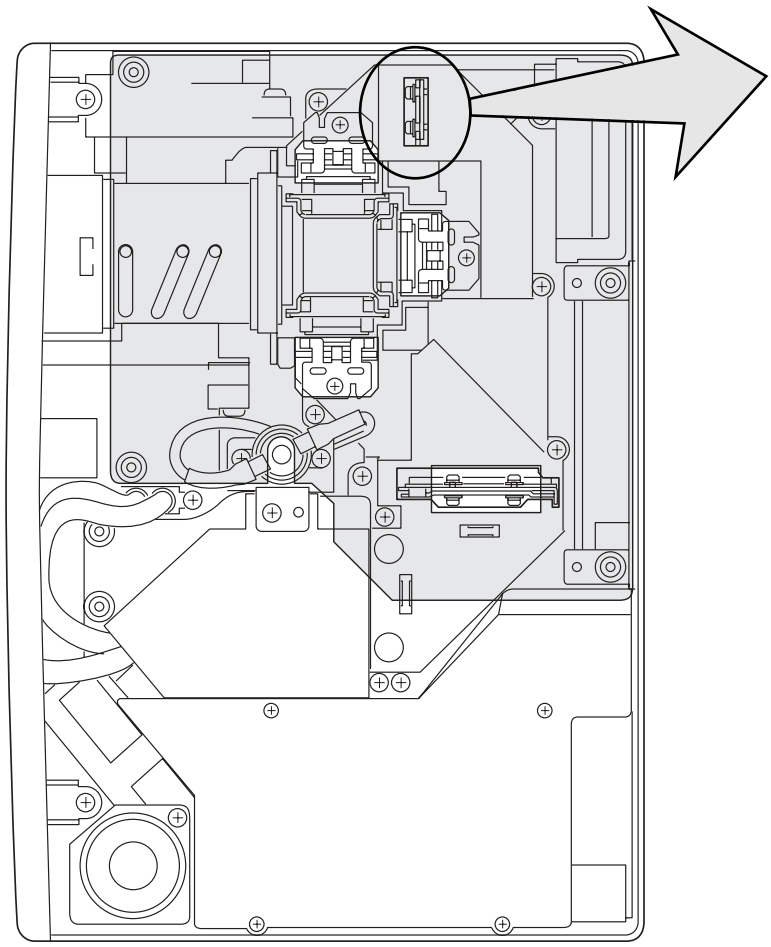



**Fig.2-2**
**Moving of Slot D**

## Relay lens-Out adjustment

**1** Turn the projector on by a state of without FPC cables.
**2** Adjust the adjustment base of relay lens ass'y to make color uniformity in white.
1) If the cyan bar appears on the left or right of the screen as shown in **Fig.4-1**, loosen 2 screws **A** with the 2.0mm hex driver, and adjust the slot **B** to make color uniformity in white by using a slot screwdriver.
2) If the cyan bar appears on the top or bottom of the screen as shown in **Fig.4-2**, loosen 2 screws **C** with the 2.0mm hex driver, and adjust the slot **D** to make color uniformity in white by using a slot screwdriver.
**3** Tighten the screws **A** and **C** to fix the relay lens unit.



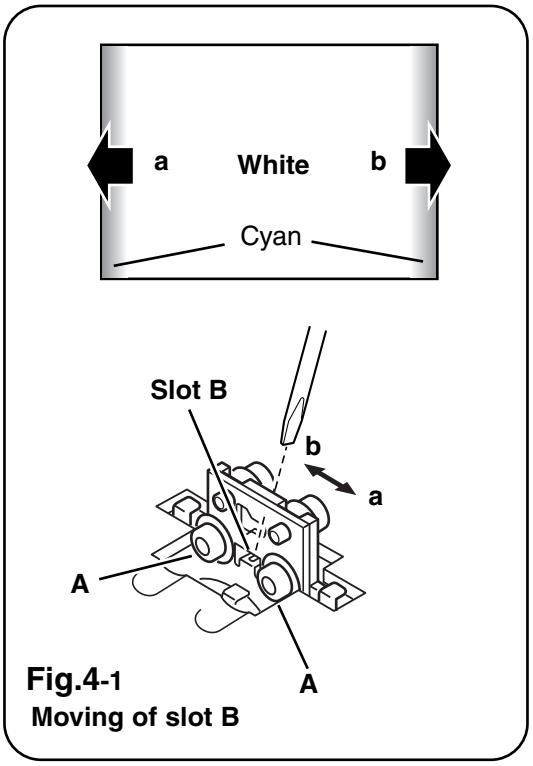



**Fig.4-1**
**Moving of slot B**

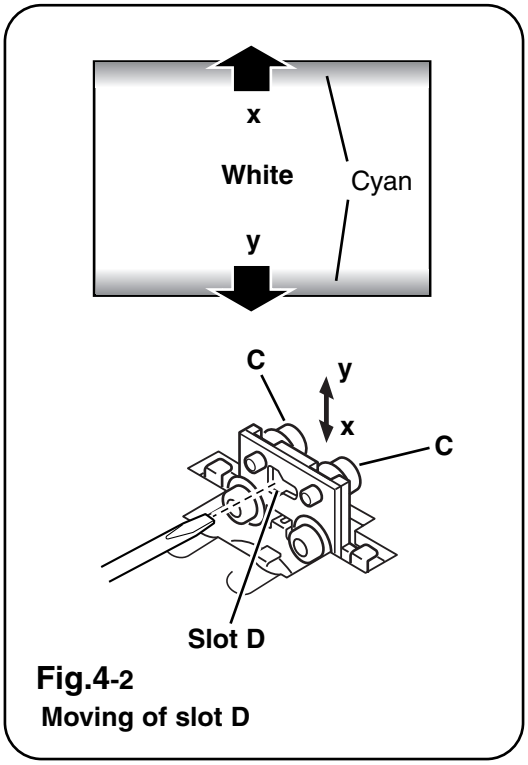



**Fig.4-2**
**Moving of slot D**

# ■ Electrical Adjustments

## ● Service Adjustment Menu Operation

### To enter the service mode

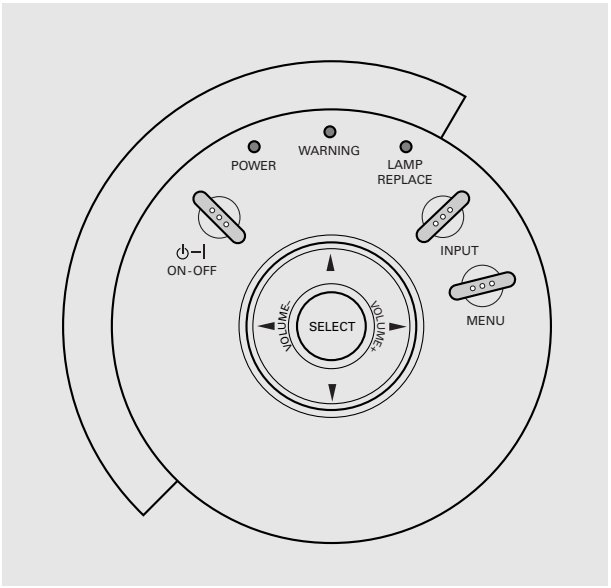
To enter the “Service Mode”, press and hold the **MENU** and **INPUT button** on the projector at the same time for more than 3 seconds, or press and hold the **MENU button** on the remote control unit for more than 20 seconds. The service menu appears on the screen as follows.

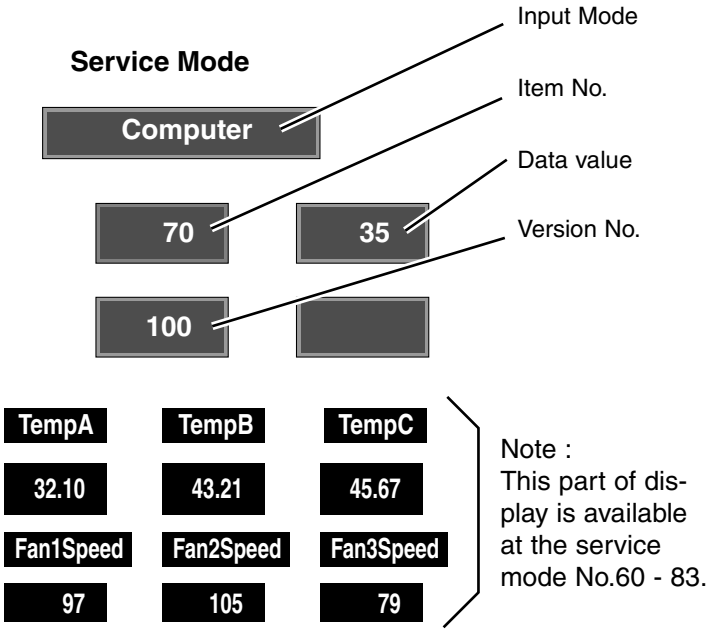
### To adjust service data

Select the adjustment item no. by pressing the pointer **UP** or **DOWN button**, and change the data value by pressing the **VOLUME –** or **VOLUME + button**. Refer to the “Service Adjustment Data Table” for further description of adjustment item no. and data value.

### To exit the service mode

To exit the service mode, press the **POWER ON-OFF button** on the projector or the remote control unit.




## ● Memory IC Replacement

IC1841 on the main board stores the data for the service adjustments, and should not be replaced except for the case of defective device.
If replaced, it should be performed the re-adjustments following to the “Electrical Adjustments”.
The data of lamp replacement monitor timer is stored in the IC1841.
Please note that the lamp replace counter is reset when the memory IC (IC1841) is replaced.
(Lamp replace counter can not be set to the previous value.)

**● Caution to memory IC replacement**

When IC1841 is replaced with new one, the CPU writes down the default data of the service adjustments to the replaced IC, refer to the service adjustment table. As these data are not the same data as factory shipped data, it should be required to perform the re-adjustments following to the “Electrical Adjustments”.
Please note that in this case the lamp replace counter will be reset.

**● Caution of Main Board replacement (in the case IC1841 is not defective)**

When the main board is replaced, IC1841 should be replaced with the one on previous main board. After replacement, it should be required to perform the re-adjustments following to the “Electrical Adjustments”.
In this case, the lamp replace counter can be kept the value as before.

# ● Circuit Adjustments

CAUTION: The each circuit has been made by the fine adjustment at factory. Do not attempt to adjust the following adjustments except requiring the readjustments in servicing otherwise it may cause loss of performance and product safety.

**[Adjustment Condition]**

● Input signal

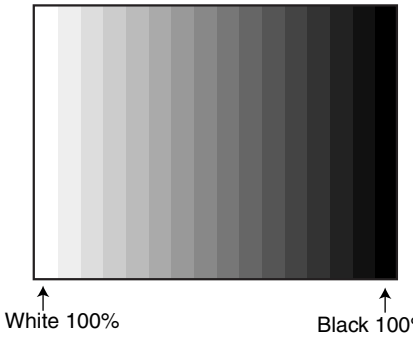
Video signal ..... 1.0Vp-p/75Ω terminated, 16 steps gray scale, white 100% and white 50% pattern (Composite video signal)

Computer signal ..... 0.7Vp-p/75Ω terminated, 16 steps gray scale pattern (SVGA)

Component Video signal..... 0.7Vp-p/75Ω terminated, 16 steps gray scale, white 100% and black 0% pattern (480i format and 480p format)

● Picture control mode..... "STANDARD" mode unless otherwise noted.

**16 steps gray scale pattern**

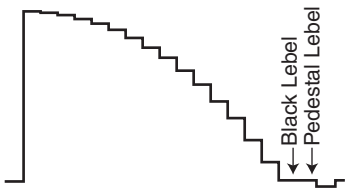



**Note:**

* Please refer to "Service Adjustment Menu Operation" for entering to the service mode and adjusting the service data.

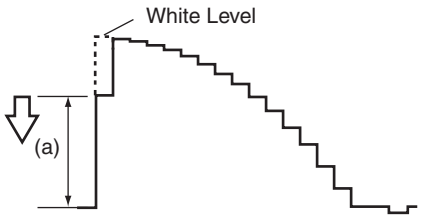
## 1 PC Pedestal adjustment

1. Receive the 16-step gray scale computer signal with **COMPUTER IN [RGB]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point "**TPR1**" (+) and chassis ground (-).
4. Select item no. "**275**" and change data value to adjust the pedestal level and black level to be the same level.
5. Connect an oscilloscope to test point "**TPG1**" (+) and chassis ground (-).
6. Select item no. "**276**" and change data value to adjust the pedestal level and black level to be the same level.
7. Connect an oscilloscope to test point "**TPB1**" (+) and chassis ground (-).
8. Select item no. "**277**" and change data value to adjust the pedestal level and black level to be the same level.



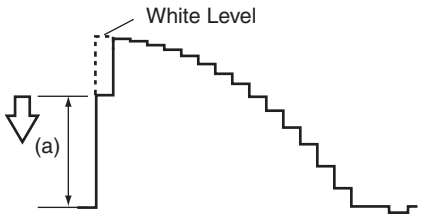

## 2 PC Gain adjustment

1. Receive the 16-step gray scale computer signal with **COMPUTER IN [RGB]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point "**TPR1**" (+) and chassis ground (-).
4. Select item no. "**7**" and change data value to adjust waveform "**a**" to be minimum amplitude.
5. Connect an oscilloscope to test point "**TPG1**" (+) and chassis ground (-).
6. Select item no. "**8**" and change data value to adjust waveform "**a**" to be minimum amplitude.
7. Connect an oscilloscope to test point "**TPB1**" (+) and chassis ground (-).
8. Select item no. "**9**" and change data value to adjust waveform "**a**" to be minimum amplitude.



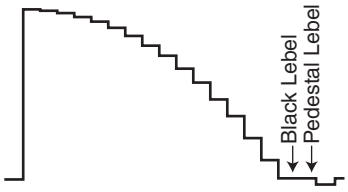
## 3 Video Gain adjustment

1. Receive the 16-step gray scale composite video signal with **Video [Video]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point "**TPR1**" (+) and chassis ground (-).
4. Select item no. "**7**" and change data value to adjust waveform "**a**" to be minimum amplitude.
5. Connect an oscilloscope to test point "**TPG1**" (+) and chassis ground (-).
6. Select item no. "**8**" and change data value to adjust waveform "**a**" to be minimum amplitude.
7. Connect an oscilloscope to test point "**TPB1**" (+) and chassis ground (-).
8. Select item no. "**9**" and change data value to adjust waveform "**a**" to be minimum amplitude.



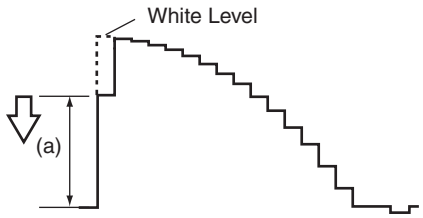

## 4 480p Pedestal adjustment

1. Receive the 16-step gray scale component signal (**480p** format) with **COMPUTER IN [COMPONENT]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point "**TPR1**" (+) and chassis ground (-).
4. Select item no. "**275**" and change data value to adjust the pedestal level and black level to be the same level.
5. Connect an oscilloscope to test point "**TPG1**" (+) and chassis ground (-).
6. Select item no. "**276**" and change data value to adjust the pedestal level and black level to be the same level.
7. Connect an oscilloscope to test point "**TPB1**" (+) and chassis ground (-).
8. Select item no. "**277**" and change data value to adjust the pedestal level and black level to be the same level.



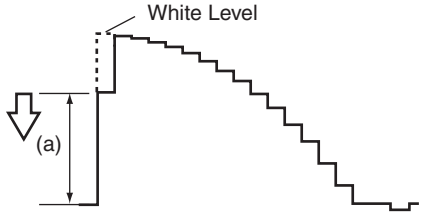

## 5 480p Gain adjustment

1. Receive the 16-step gray scale component signal (**480p** format) with **COMPUTER IN [COMPONENT]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point "**TPR1**" (+) and chassis ground (-).
4. Select item no. "**7**" and change data value to adjust waveform "**a**" to be minimum amplitude.
5. Connect an oscilloscope to test point "**TPG1**" (+) and chassis ground (-).
6. Select item no. "**8**" and change data value to adjust waveform "**a**" to be minimum amplitude.
7. Connect an oscilloscope to test point "**TPB1**" (+) and chassis ground (-).
8. Select item no. "**9**" and change data value to adjust waveform "**a**" to be minimum amplitude.




## 6 480i Gain adjustment

1. Receive the 16-step gray scale component signal (**480i** format) with **COMPUTER IN [COMPONENT]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point "**TPR1**" (+) and chassis ground (-).
4. Select item no. "**7**" and change data value to adjust waveform "**a**" to be minimum amplitude.
5. Connect an oscilloscope to test point "**TPG1**" (+) and chassis ground (-).
6. Select item no. "**8**" and change data value to adjust waveform "**a**" to be minimum amplitude.
7. Connect an oscilloscope to test point "**TPB1**" (+) and chassis ground (-).
8. Select item no. "**9**" and change data value to adjust waveform "**a**" to be minimum amplitude.



## 7 Gamma adjustment

**[PC-GAMMA ADJUSTMENT]**

1. Receive the 100% whole-white computer signal with **COMPUTER IN [RGB]** mode.
2. Enter the service mode.
3. Measure luminance on the screen with the luminance meter. It is **A** for the reading of luminance meter.
4. Change the signal source to the 50% whole-white computer signal with **COMPUTER IN [RGB]** mode.
5. Select item no. "**16**" and change data value to make the reading of luminance meter to be **A x 23%**.

**[AV-GAMMA ADJUSTMENT]**

1. Receive the 100% whole-white composite video signal with **Video [Video]** mode.
2. Enter the service mode.
3. Measure luminance on the screen with the luminance meter. It is **B** for the reading of luminance meter.
4. Change the signal source to the 50% whole-white computer signal with **Video [Video]** mode.
5. Select item no. "**16**" and change data value to make the reading of luminance meter to be **B x 22%**.

## 8 Common Center adjustment

1. Receive the 16-step gray scale computer signal with **COMPUTER IN [RGB]** mode.
2. Enter the service mode.
3. Project only **red** light component to the screen.
4. Select item no. "**15**" and change data value to obtain the minimum flicker on the screen.
5. Project only **green** light component to the screen.
6. Select item no. "**14**" and change data value to obtain the minimum flicker on the screen.
7. Project only **blue** light component to the screen.
8. Select item no. "**13**" and change data value to obtain the minimum flicker on the screen.

## 9 White Balance adjustment

**[PC WHITE BALANCE ADJUSTMENT]**

1. Receive the 16-step gray scale computer signal with **COMPUTER IN [RGB]** mode.
2. Enter the service mode, select item no. "**17**" (Red) or "**18**" (Blue), and change data values respectively to make a proper white balance.

**[AV WHITE BALANCE ADJUSTMENT]**

3. Receive the 16-step gray scale video signal with **Video [Video]** mode.
4. Enter the service mode, select item no. "**17**" (Red) or "**18**" (Blue), and change data values respectively to make a proper white balance.

Confirm that the same white balance is obtained in video and computer input.

## NOTE ON WHITE UNIFORMITY ADJUSTMENT

If you find the color shading on the screen, please adjust the white uniformity by using the proper computer and "Color Shading Correction" software supplied separately. The software can be ordered as follows;

**COLOR SHADING CORRECTION ver.. 3.0**
Service Parts No. 645 056 6288

# ● Service Adjustment Data Table

These initial values are the reference data written from the CPU ROM to memory IC when replaced new memory IC. The adjustment items indicated with "✻" are required to readjust following to the "Electrical adjustments". Other items should be used with the initial data value.

| ItemNo. | Name | Device | Initial | | | | | Detail |
|---|---|---|---|---|---|---|---|---|
| | | | PC | YCbCr | | Video | | |
| | | | | 480i(+) | 480p(+) | NTSC | PAL | Note: 480i(+) = 480i & 575i, 480p(+) = 480p & HDTV |
| 1 | R-VIDEOCNT | M62392FP | 143 | | | | | |
| 2 | G-VIDEOCNT | M62392FP | 143 | | | | | Video Center Adjustment ( = R/G/B-V1) |
| 3 | B-VIDEOCNT | M62392FP | 143 | | | | | |
| 4 | R-Sub-Bright | L3E7070K0A | 0 | | | | | |
| 5 | G-Sub-Bright | L3E7070K0A | 0 | | | | | Sub-Bright Adjustment |
| 6 | B-Sub-Bright | L3E7070K0A | 0 | | | | | |
| 7 | R-Sub-Gain | L3E7070K0A | 550 | 560 | 540 | 530 | | ✻ Gain Adjustment [R] |
| 8 | G-Sub-Gain | L3E7070K0A | 550 | 560 | 540 | 530 | | ✻ Gain Adjustment [G] |
| 9 | B-Sub-Gain | L3E7070K0A | 530 | 550 | 540 | 530 | | ✻ Gain Adjustment [B] |
| 10 | REF-R | M62392FP | 190 | | | | | |
| 11 | REF-G | M62392FP | 190 | | | | | |
| 12 | REF-B | M62392FP | 190 | | | | | |
| 13 | BVCOM | L3E6100D0A | 130 | | | | | |
| 14 | GVCOM | L3E6100D0A | 130 | | | | | ✻ Common Center Adjustment |
| 15 | RVCOM | L3E6100D0A | 130 | | | | | |
| 16 | G-Gamma-Shift | L3E7070K0A | 512 | 512 | 512 | 512 | | ✻ Gamma Adjustment |
| 17 | R-Gamma-Shift | L3E7070K0A | 512 | 512 | 512 | 512 | | ✻ White Balance Adjustment [R] |
| 18 | B-Gamma-Shift | L3E7070K0A | 512 | 512 | 512 | 512 | | ✻ White Balance Adjustment [B] |
| 19 | NRS-B | M62393FP | 153 | | | | | NRS Adjustment (up side) |
| 20 | NRS-A | M62392FP | 35 | | | | | NRS Adjustment (down side) |
| 21 | R-V2 | M62392FP | 163 | | | | | |
| 22 | G-V2 | M62392FP | 163 | | | | | Video Center Adjustment (Link to Item No.1-3) |
| 23 | B-V2 | M62392FP | 163 | | | | | |
| 24 | SubBright | PW168 | 128 | 128 | 128 | 128 | | |
| 25 | SubColor | PW168 | 85 | 85 | 85 | N/A | | |
| 26 | SubTint | PW168 | 128 | 128 | 128 | N/A | | |
| 27 | - | | 0 | | | | | |
| 28 | SubBright (Video) | VPC3230 | N/A | Note 1 | N/A | 128 | 127 | Note 1: 575i = the same as PAL |
| 29 | SubCont (Video) | VPC3230 | N/A | Note 1 | N/A | 50 | 49 | |
| 30 | SubColor (Video) | VPC3230 | N/A | Note 1 | N/A | 2070 | 2070 | |
| 31 | SubTint (Video) | VPC3230 | N/A | Note 1 | N/A | 512 | 512 | |
| 32 | SubBright (480i,575i) | VPC3230 | N/A | 199 | N/A | 196 | 197 | |
| 33 | SubCont (480i,575i) | VPC3230 | N/A | 25 | N/A | 25 | 26 | |
| 34 | SubColor (480i,575i) | VPC3230 | N/A | 31 | N/A | 23 | 23 | Note 2: 480i = the same as NTSC |
| 35 | SubColor (480i,575i) | VPC3230 | N/A | Note 2 | N/A | 29 | 29 | 575i = the same as PAL |
| 36 | - | | 0 | | | | | |
| 37 | V-Line Color Shading Correction Setting (R1) | L3E7070K0A | 2 | | | | | Vertical Line Color Shading Correction |
| 38 | V-Line Color Shading Correction Setting (R2) | L3E7070K0A | 1 | | | | | |
| 39 | V-Line Color Shading Correction Setting (R3) | L3E7070K0A | 254 | | | | | |
| 40 | V-Line Color Shading Correction Setting (G1) | L3E7070K0A | 2 | | | | | |
| 41 | V-Line Color Shading Correction Setting (G2) | L3E7070K0A | 1 | | | | | |
| 42 | V-Line Color Shading Correction Setting (G3) | L3E7070K0A | 254 | | | | | |
| 43 | V-Line Color Shading Correction Setting (B1) | L3E7070K0A | 2 | | | | | |
| 44 | V-Line Color Shading Correction Setting (B2) | L3E7070K0A | 1 | | | | | |
| 45 | V-Line Color Shading Correction Setting (B3) | L3E7070K0A | 254 | | | | | |
| 46 | R-Reference voltage (H) | L3E7070K0A | 0 | | | | | |
| 47 | R-Reference voltage (L) | L3E7070K0A | 0 | | | | | |
| 48 | G-Reference voltage (H) | L3E7070K0A | 0 | | | | | |
| 49 | G-Reference voltage (L) | L3E7070K0A | 0 | | | | | |
| 50 | B-Reference voltage (H) | L3E7070K0A | 0 | | | | | |
| 51 | B-Reference voltage (L) | L3E7070K0A | 0 | | | | | |
| 52 | Color Shading Correction ON/OFF | L3E7070K0A | 1 | | | | | |
| 53 | Lamp Life Time | | 0 | | | | | Read only |
| 54 | Baud Rate | | 1 | | | | | 0: 9600 / 1: 19200 / 2: 38400 |
| 55 | Shoot Out Mode | | 0 | | | | | 0: Normal / 1: Shoot out 1 |
| 56 | Forced NOBRAND | | 0 | | | | | 0: Normal / 1: NOBRAND |
| | **FAN CONTROL** | | | | | | | Range |
| 60 | Fan Control SW | | 0 | | | | | 0-1 0: Auto / 1: manual |
| 61 | Fan Min. control (Fan 1) | | 97 | | | | | 70-210 |
| 62 | Fan Min. control (Fan 2) | | 118 | | | | | 70-210 |

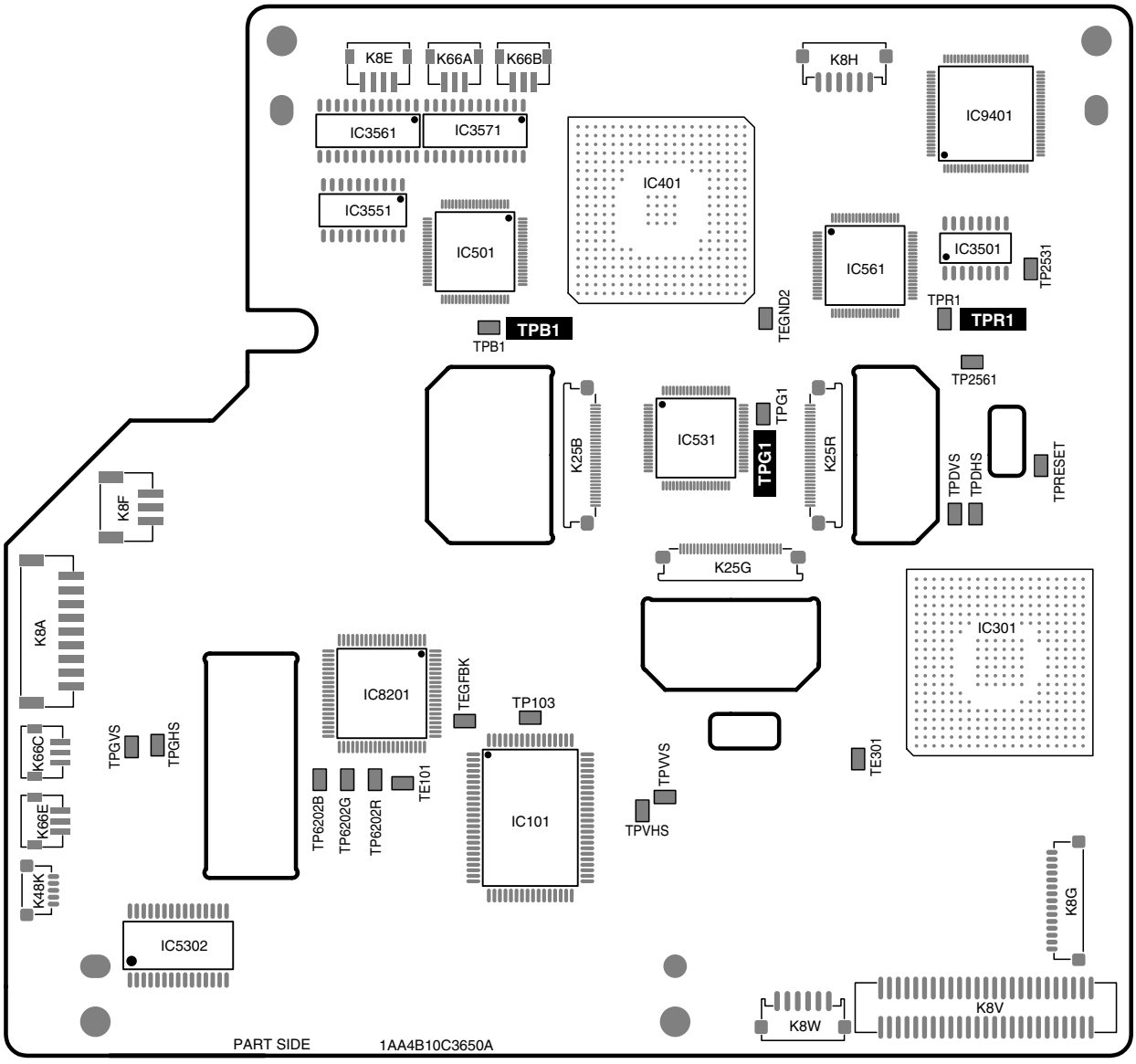
| ItemNo. | Name | Device | Initial | | | | | Detail | |
|---|---|---|---|---|---|---|---|---|---|
| | | | PC | YCbCr | | Video | | Note: 480i(+) = 480i & 575i, 480p(+) = 480p & HDTV | |
| | | | | 480i(+) | 480p(+) | NTSC | PAL | | |
| | | | | | | | | Range | |
| 63 | Fan Min. control (Fan 3) | | | | 79 | | | 70-210 | |
| 65 | Fan Max. control (Fan 1) | | | | 205 | | | 70-210 | |
| 66 | Fan Max. control (Fan 2) | | | | 147 | | | 70-210 | |
| 67 | Fan Max. control (Fan 3) | | | | 205 | | | 70-210 | |
| 69 | Temp. Low ( Sensor 1) | | | | 28 | | | 10-100 | |
| 70 | Temp High (Sensor 1) | | | | 34 | | | 30-100 | |
| 71 | Temp. Error (Sensor 1) | | | | 40 | | | 30-100 | |
| 72 | Temp. Low ( Sensor 2) | | | | 43 | | | 10-100 | |
| 73 | Fan 2 Low Speed Cooling Time at the first half period | | | | 0 | | | 0-20 | 0: 20sec / 1: 22sec / ... / 20: 60sec |
| 74 | Fan 2 Low Speed Cooling Voltage at the first half period | | | | 62 | | | 70-210 | |
| 75 | Temp. High (Sensor 2) | | | | 41 | | | 30-100 | |
| 76 | Temp. Error (Sensor 2) | | | | 51 | | | 30-100 | |
| 77 | Temp. Error (Sensor 1-3) | | | | 30 | | | 10-100 | |
| 78 | Temp. Error Cooling TIme | | | | 3 | | | 0-15 | 0: always ON / 1: 30s / 2: 60s / ... / 15: 450s |
| 79 | Cooling Time | | | | 3 | | | 1-15 | 1: 30sec / 2: 60sec / ... / 15: 450sec |
| 80 | HighLand Mode | | | | 0 | | | 0-3 | 0: Auto / 1: ON Low / 2: ON Mid / 3: ON High |
| 81 | Fan1 Speed | | | | 205 | | | | Fan Speed at Manual Setting |
| 82 | Fan2 Speed | | | | 147 | | | | |
| 83 | Fan3 Speed | | | | 205 | | | | |
| 84 | Min. Temp. (Sensor 2) at temp. error (Sensor 1-2) | | | | 45 | | | 30-100 | |
| 85 | Normal Fan Mode | | | | 0 | | | 0-2 | 0: Auto / 1: manual / 2: HighLand Mode |
| 86 | Cooling Fan Mode | | | | 0 | | | | |
| 87 | Service Fan Mode | | | | 0 | | | | |
| | **VPC3230** | | | | | | | | |
| 90 | Notch Filter Select | VPC3230 | N/A | Note 1 | N/A | 3 | 3 | Note 1: 480i = the same as NTSC | |
| 91 | Diagonal Dot Reduction | VPC3230 | N/A | Note 1 | N/A | 1 | 1 | 575i = the same as PAL | |
| 92 | Horizontal Differential Gain | VPC3230 | N/A | Note 1 | N/A | 3 | 3 | | |
| 93 | Vertical Differential Gain | VPC3230 | N/A | Note 1 | N/A | 0 | 0 | | |
| 94 | Vertical Peaking Gain | VPC3230 | N/A | Note 1 | N/A | 7 | 7 | | |
| 95 | AFC other1 | VPC3230 | N/A | Note 1 | N/A | 540 | 540 | | |
| 96 | AFC other2 | VPC3230 | N/A | Note 1 | N/A | 536 | 536 | | |
| 97 | Horizontal Peaking Filter | VPC3230 | N/A | Note 1 | N/A | 1 | 1 | | |
| 98 | Peaking Gain | VPC3230 | N/A | Note 1 | N/A | 2 | 2 | | |
| 99 | Peaking Filter Coring Enable | VPC3230 | N/A | Note 1 | N/A | 0 | 0 | | |
| 101 | Horizontal Lowpass Filter | VPC3230 | N/A | Note 1 | N/A | 1 | 1 | | |
| 102 | Horizontal Lowpass Filter Chroma | VPC3230 | N/A | Note 1 | N/A | 0 | 0 | | |
| 103 | DOR | VPC3230 | N/A | Note 1 | N/A | 0 | 0 | | |
| 104 | COR | VPC3230 | N/A | Note 1 | N/A | 0 | 0 | | |
| 105 | SGAIN | VPC3230 | N/A | Note 1 | N/A | 15 | 15 | | |
| 106 | YC Delay | VPC3230 | N/A | Note 1 | N/A | 62 | 62 | | |
| | **ADC** | | | | | | | | |
| 272 | REDGAIN | AD9883 | 70 | N/A | 70 | N/A | N/A | | |
| 273 | GRNGAIN | AD9883 | 70 | N/A | 70 | N/A | N/A | | |
| 274 | BLUGAIN | AD9883 | 70 | N/A | 70 | N/A | N/A | | |
| 275 | REDOFST | AD9883 | 60 | N/A | 60 | N/A | N/A | ※ Pedestal Adjustment [R] | |
| 276 | GRNOFST | AD9883 | 60 | N/A | 65 | N/A | N/A | ※ Pedestal Adjustment [G] | |
| 277 | BLUOFST | AD9883 | 65 | N/A | 65 | N/A | N/A | ※ Pedestal Adjustment [B] | |
| 278 | Clamp Duration | AD9883 | | | | N/A | N/A | | |
| 279 | Clamp Placement | AD9883 | | | | N/A | N/A | | |
| 281 | RACLP | M62399FP | 0 | | | | | | |
| 282 | GACLP | M62399FP | 0 | | | | | | |
| 283 | BACLP | M62399FP | 0 | | | | | | |
| | **FAN CONTROL 2** | | | | | | | | |
| 288 | Eco Fan Max. Control (Fan 1) | | | | 170 | | | | |
| 289 | Eco Fan Max. Control (Fan 2) | | | | 71 | | | | |
| 290 | Eco Fan Max. Control (Fan 3) | | | | 130 | | | | |
| 291 | DLY3.3V_ON | | | | 100 | | | | |
| 292 | DLY5V_ON | | | | 100 | | | | |
| 293 | Eco Fan Min. Control (Fan 1) | | | | 79 | | | | |
| 294 | Eco Fan Min. Control (Fan 2) | | | | 62 | | | | |
| 295 | Eco Fan Min. Control (Fan 3) | | | | 71 | | | | |
| | **OverScan** | | | | | | | | |
| 297 | Expand Ratio (Vertical) 60Hz | PIXEL | | N/A | | 1 | N/A | Video and S-Video mode only. | |
| 298 | Expand Ratio (Horizontal) 60Hz | PIXEL | | N/A | | 17 | N/A | Progressive OFF | |
| 299 | Position (Horizontal) 60Hz | PIXEL | | N/A | | 513 | N/A | | |

| ItemNo. | Name | Device | Initial | | | | | Detail |
|---|---|---|---|---|---|---|---|---|
| | | | PC | YCbCr | | Video | | Note: 480i(+) = 480i & 575i, 480p(+) = 480p & HDTV |
| | | | | 480i(+) | 480p(+) | NTSC | PAL | |
| 300 | Position (Vertical) 60Hz | PIXEL | N/A | | | 384 | N/A | |
| 301 | Expand Ratio (Vertical) 50Hz | PIXEL | N/A | | | | 5 | Video and S-Video mode only |
| 302 | Expand Ratio (Horizontal) 50Hz | PIXEL | N/A | | | | 24 | Progressive OFF |
| 303 | Position (Horizontal) 50Hz | PIXEL | N/A | | | | 519 | |
| 304 | Position (Vertical) 50Hz | PIXEL | N/A | | | | 383 | |
| 305 | Expand Ratio (Vertical) 480i | PIXEL | N/A | 1 | N/A | | | For Component 480i mode |
| 306 | Expand Ratio (Horizontal) 480i | PIXEL | N/A | 17 | N/A | | | Progressive OFF |
| 307 | Position (Horizontal) 480i | PIXEL | N/A | 513 | N/A | | | |
| 308 | Position (Vertical) 480i | PIXEL | N/A | 384 | N/A | | | |
| 309 | Expand Ratio (Vertical) 575i | PIXEL | N/A | 5 | N/A | | | For Component 575i mode |
| 310 | Expand Ratio (Horizontal) 575i | PIXEL | N/A | 24 | N/A | | | Progressive OFF |
| 311 | Position (Horizontal) 575i | PIXEL | N/A | 519 | N/A | | | |
| 312 | Position (Vertical) 575i | PIXEL | N/A | 383 | N/A | | | |
| 313 | Expand Ratio (Vertical) 480p | PIXEL | N/A | | 10 | N/A | | For Component 480p mode |
| 314 | Expand Ratio (Horizontal) 480p | PIXEL | N/A | | 32 | N/A | | |
| 315 | Position (Horizontal) 480p | PIXEL | N/A | | 517 | N/A | | |
| 316 | Position (Vertical) 480p | PIXEL | N/A | | 382 | N/A | | |
| 317 | Expand Ratio (Vertical) 575p | PIXEL | N/A | | 18 | N/A | | For Component 575p mode |
| 318 | Expand Ratio (Horizontal) 575p | PIXEL | N/A | | 29 | N/A | | |
| 319 | Position (Horizontal) 575p | PIXEL | N/A | | 517 | N/A | | |
| 320 | Position (Vertical) 575p | PIXEL | N/A | | 393 | N/A | | |
| 321 | Expand Ratio (Vertical) 720p | PIXEL | 9 | N/A | 10 | N/A | | For Component and RGB 720p mode |
| 322 | Expand Ratio (Horizontal) 720p | PIXEL | 15 | N/A | 14 | N/A | | |
| 323 | Position (Horizontal) 720p | PIXEL | 513 | N/A | 525 | N/A | | |
| 324 | Position (Vertical) 720p | PIXEL | 385 | N/A | 385 | N/A | | |
| 325 | Expand Ratio (Vertical) 1035i | PIXEL | 5 | N/A | 5 | N/A | | For Component mode and RGB HDTV 1035i |
| 326 | Expand Ratio (Horizontal) 1035i | PIXEL | 23 | N/A | 23 | N/A | | |
| 327 | Position (Horizontal) 1035i | PIXEL | 510 | N/A | 519 | N/A | | |
| 328 | Position (Vertical) 1035i | PIXEL | 382 | N/A | 382 | N/A | | |
| 329 | Expand Ratio (Vertical) 1080i | PIXEL | 7 | N/A | 7 | N/A | | For Component mode and RGB HDTV 1080i |
| 330 | Expand Ratio (Horizontal) 1080i | PIXEL | 22 | N/A | 23 | N/A | | |
| 331 | Position (Horizontal) 1080i | PIXEL | 508 | N/A | 517 | N/A | | |
| 332 | Position (Vertical) 1080i | PIXEL | 382 | N/A | 383 | N/A | | |
| 333 | Expand Ratio (Vertical) 60Hz | PIXEL | 7 | N/A | | | | For RGB NTSC 480i |
| 334 | Expand Ratio (Horizontal) 60Hz | PIXEL | 36 | N/A | | | | |
| 335 | Position (Horizontal) 60Hz | PIXEL | 517 | N/A | | | | |
| 336 | Position (Vertical) 60Hz | PIXEL | 383 | N/A | | | | |
| 337 | Expand Ratio (Vertical) 50Hz | PIXEL | 20 | N/A | | | | For RGB PAL 575i |
| 338 | Expand Ratio (Horizontal) 50Hz | PIXEL | 40 | N/A | | | | |
| 339 | Position (Horizontal) 50Hz | PIXEL | 515 | N/A | | | | |
| 340 | Position (Vertical) 50Hz | PIXEL | 384 | N/A | | | | |
| 341 | Expand Ratio (Vertical) 50Hz | PIXEL | 7 | N/A | 7 | N/A | | For 1080i_50Hz and RGB HDTV 1080i_50Hz |
| 342 | Expand Ratio (Horizontal) 50Hz | PIXEL | 14 | N/A | 14 | N/A | | |
| 343 | Position (Horizontal) 50Hz | PIXEL | 517 | N/A | 522 | N/A | | |
| 344 | Position (Vertical) 50Hz | PIXEL | 384 | N/A | 384 | N/A | | |
| 345 | Expand Ratio (Vertical) SCART | PIXEL | 5 | N/A | | | | For RGB SCART |
| 346 | Expand Ratio (Horizontal) SCART | PIXEL | 23 | N/A | | | | Progressive OFF |
| 347 | Position (Horizontal) SCART | PIXEL | 518 | N/A | | | | |
| 348 | Position (Vertical) SCART | PIXEL | 383 | N/A | | | | |
| 349 | Expand Ratio (Vertical) 60Hz | PIXEL | N/A | | | 2 | N/A | For Video and S-Video only |
| 350 | Expand Ratio (Horizontal) 60Hz | PIXEL | N/A | | | 17 | N/A | Progressive ON |
| 351 | Position (Horizontal) 60Hz | PIXEL | N/A | | | 513 | N/A | |
| 352 | Position (Vertical) 50Hz | PIXEL | N/A | | | 383 | N/A | |
| 353 | Expand Ratio (Vertical) 50Hz | PIXEL | N/A | | | | 5 | |
| 354 | Expand Ratio (Horizontal) 50Hz | PIXEL | N/A | | | | 23 | |
| 355 | Position (Horizontal) 50Hz | PIXEL | N/A | | | | 519 | |
| 356 | Position (Vertical) 50Hz | PIXEL | N/A | | | | 383 | |
| 357 | Expand ratio (Vertical) 480i | PIXEL | N/A | 2 | N/A | | | For Component 480i mode |
| 358 | Expand Ratio (Horizontal) 480i | PIXEL | N/A | 17 | N/A | | | Progressive ON |
| 359 | Position (Horizontal) 480i | PIXEL | N/A | 513 | N/A | | | |
| 360 | Position (Vertical) 480i | PIXEL | N/A | 383 | N/A | | | |
| 361 | Expand ratio (Vertical) 575i | PIXEL | N/A | 5 | N/A | | | For Component 575i mode |
| 362 | Expand Ratio (Horizontal) 575i | PIXEL | N/A | 24 | N/A | | | Progressive ON |
| 363 | Position (Horizontal) 575i | PIXEL | N/A | 519 | N/A | | | |
| 364 | Position (Vertical) 575i | PIXEL | N/A | 383 | N/A | | | |
| 365 | Expand ratio (Vertical) SCART | PIXEL | 5 | N/A | | | | For RGB SCART |

| ItemNo. | Name | Device | Initial | | | | | Detail |
|---|---|---|---|---|---|---|---|---|
| | | | PC | YCbCr | | Video | | |
| | | | | 480i(+) | 480p(+) | NTSC | PAL | Note: 480i(+) = 480i & 575i, 480p(+) = 480p & HDTV |
| 366 | Expand Ratio (Horizontal) SCART | PIXEL | 23 | N/A | | | | For RGB SCART |
| 367 | Position (Horizontal) SCART | PIXEL | 518 | N/A | | | | Progressive ON |
| 368 | Position (Vertical) SCART | PIXEL | 383 | N/A | | | | |
| 369 | Expand ratio (Vertical) 60Hz | PIXEL | 10 | N/A | | | | For RGB 480p |
| 370 | Expand Ratio (Horizontal) 60Hz | PIXEL | 33 | N/A | | | | |
| 371 | Position (Horizontal) 60Hz | PIXEL | 508 | N/A | | | | |
| 372 | Position (Vertical) 60Hz | PIXEL | 375 | N/A | | | | |
| 373 | Expand ratio (Vertical) 50Hz | PIXEL | 21 | N/A | | | | For RGB 575p |
| 374 | Expand Ratio (Horizontal) 50Hz | PIXEL | 30 | N/A | | | | |
| 375 | Position (Horizontal) 50Hz | PIXEL | 512 | N/A | | | | |
| 376 | Position (Vertical) 50Hz | PIXEL | 385 | N/A | | | | |
| | | | | | | | | |
| 400 | Gamma Shift Combination ON/OFF | | 1 | | | | | 0: each source separate / 1: PC source only separate |
| 401 | PC Frame Lock OFF | | 0 | | | | | 0: ON for all source / 1: OFF at PC |
| 402 | Auto Grayscale black control start point | | 31 | | | | | |
| 403 | Auto Grayscale black control limit point | | 16 | | | | | |
| 404 | Auto Grayscale black control target point | | 0 | | | | | |
| 405 | Auto Grayscale white control start point | | 33 | | | | | |
| 406 | Auto Grayscale white control limit point | | 56 | | | | | |
| 407 | Auto Grayscale white control target point | | 0 | | | | | |

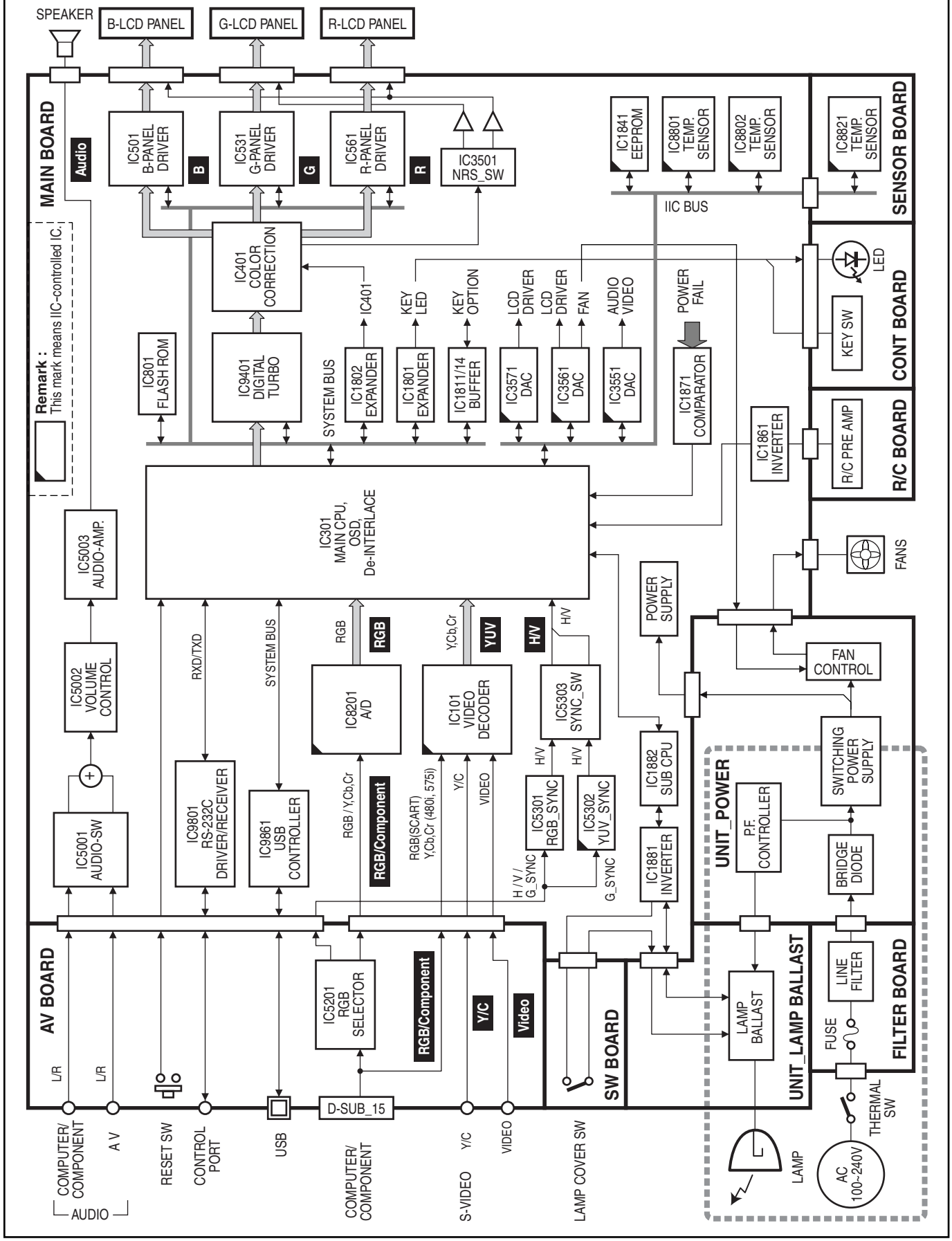
# Test Points and Locations

## ● MAIN BOARD

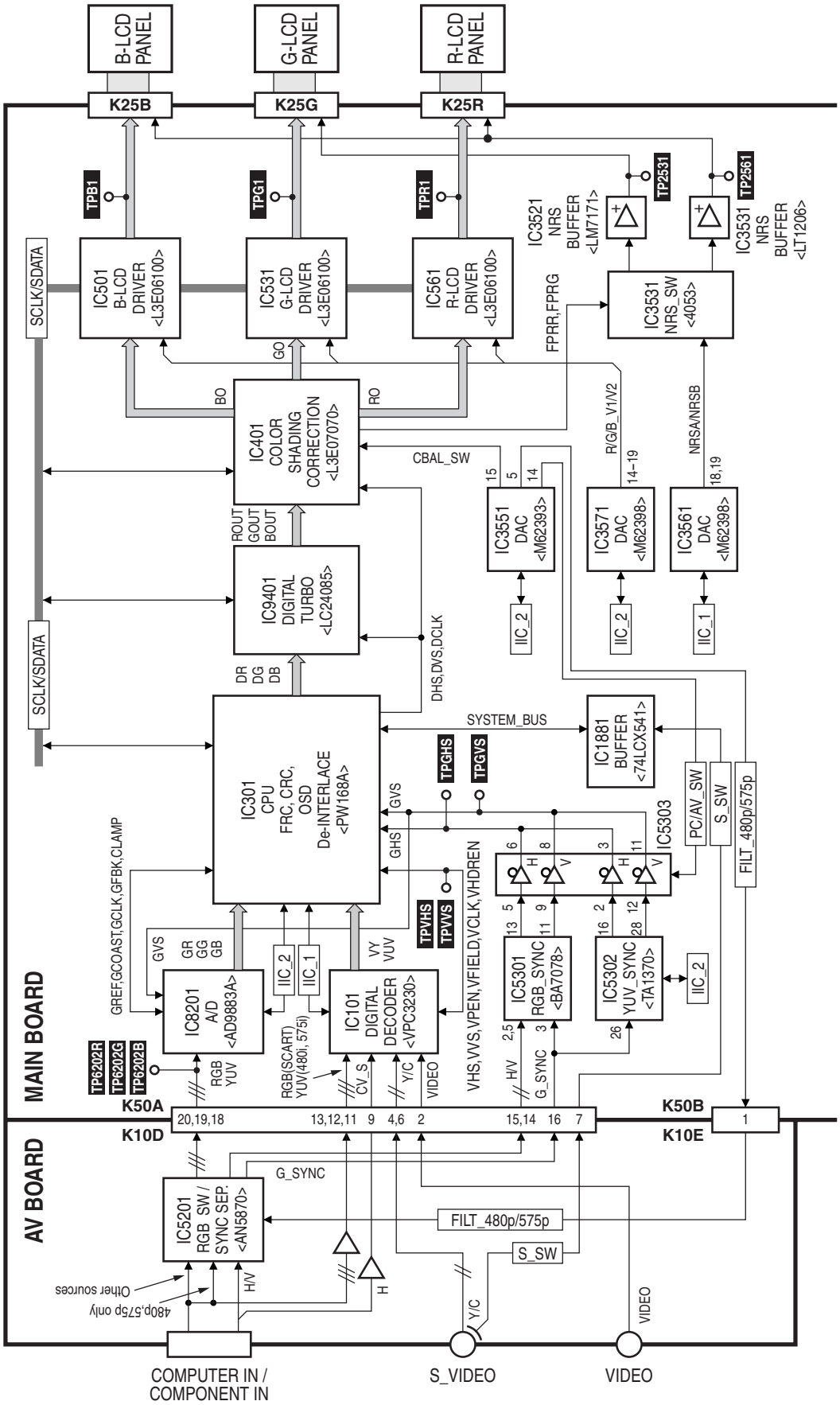


# ■ Chassis Block Diagrams

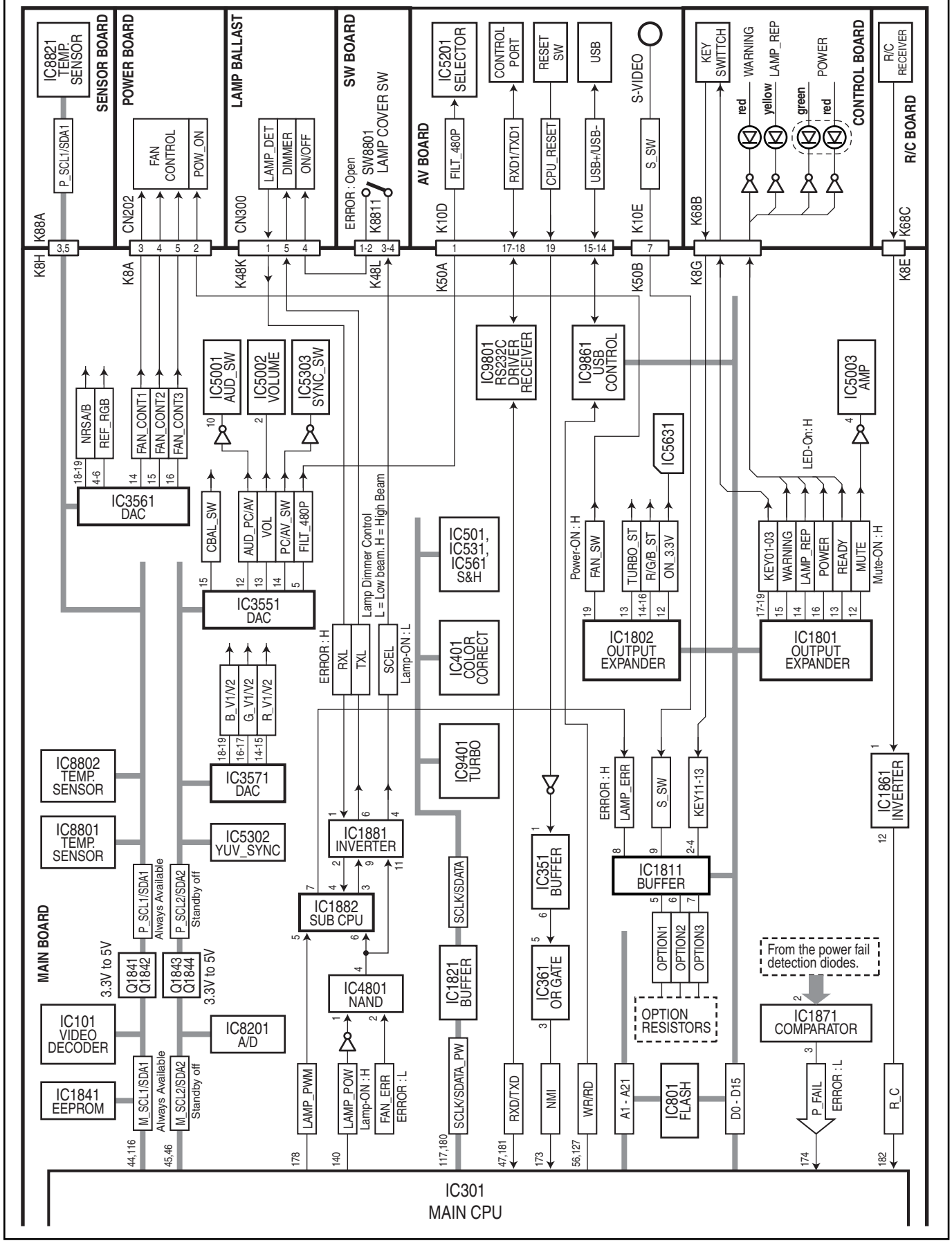
## ● Chassis Overview



## ● Video signal processing circuit and LCD panel driving circuit

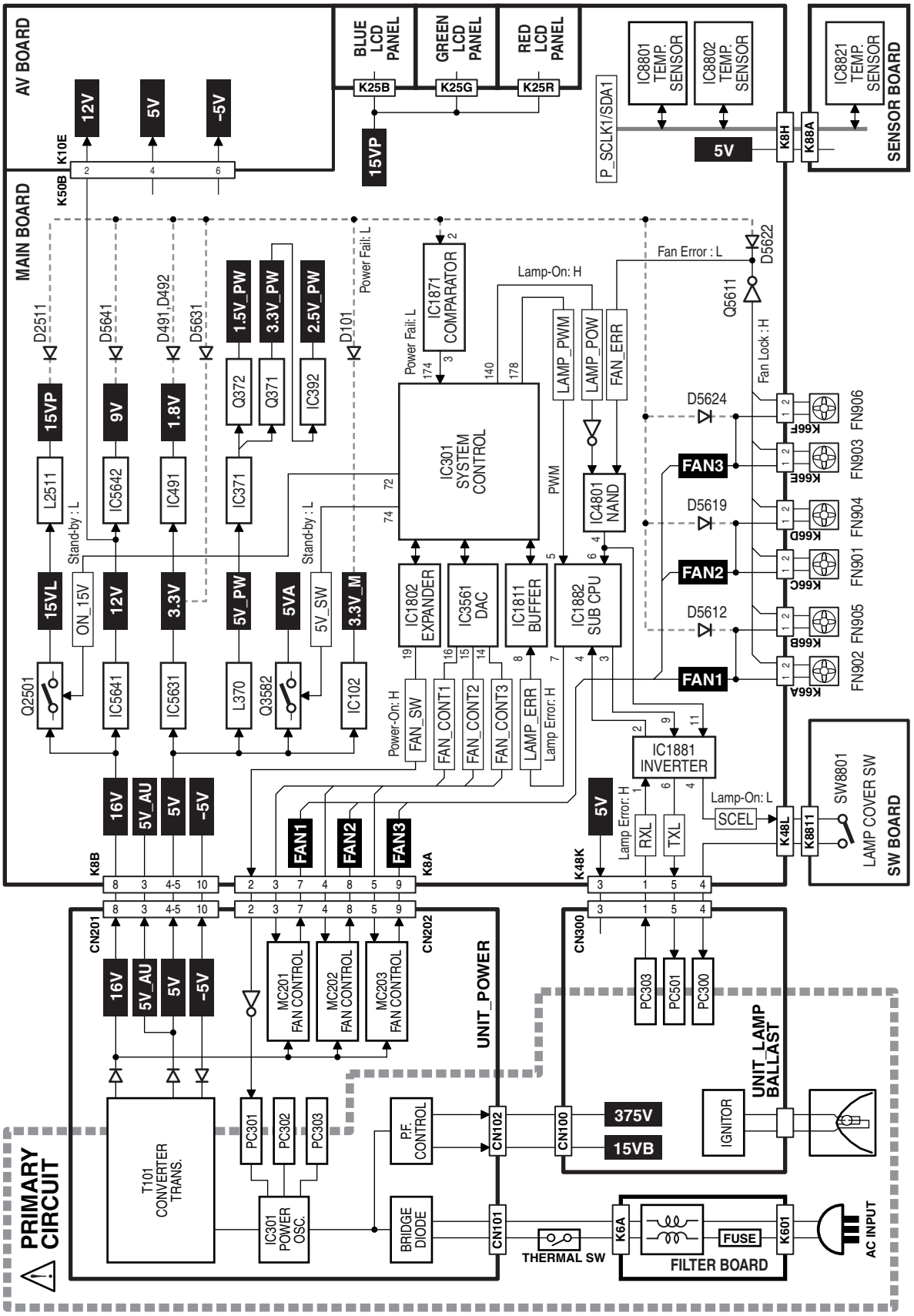


## ● System Controls



# ■ Power Supply Lines

## ● Power supply circuit, Protection circuit and Fan control circuit



# ■ Troubleshooting

## *Indicators and Projector Condition*

Check the indicators for projector condition.

| Indicators | | | Projector Condition |
|---|---|---|---|
| POWER **red/green** | WARNING **red** | LAMP REPLACE **yellow** | |
| ● | ● | ● | The projector is OFF. (The AC power cord is unplugged.) |
| ◍ | ● | * | The projector is preparing for stand-by or the projection lamp is being cooled down. The projector cannot be turned on until cooling is completed. |
| ◍ | ● | * | The projector is ready to be turned on with the POWER ON-OFF button. |
| ○ | ● | * | The projector is operating normally. |
| ◍ | ● | * | The projector is in the Power management mode. |
| ◍ | ◍ | * | The temperature inside the projector is abnormally high. The projector cannot be turned on. When the projector is cooled down enough and the temperature returns to normal, the POWER indicator lights red and the projector can be turned on. (The WARNING . indicator keeps flashing.) Check and clean the Air filter. |
| ◍ | ◍ | * | The projector has been cooled down enough and the temperature returns to normal. When turning on the projector, the WARNING indicator stops flashing. Check and clean the air filters. |
| ● | ◍ | * | The projector detects an abnormal condition and cannot be turned on. Unplug the AC power cord and plug it again to turn on the projector. If the projector is turned off again, disconnect the AC power cord and contact the dealer or the service center for service and checkup. Do not leave the projector on. It may cause electric shock or a fire hazard. |

○ • • • lights green. ◍ • • • flashes green. ◍ • • • lights red. ◍ • • • flashes red. ● • • • off

* When the life of the projection lamp draws to an end, the LAMP REPLACE indicator lights yellow. When this indicator lights yellow, replace the projection lamp with a new one promptly. Reset the Lamp replace counter after replacement of the lamp.

## ● No Power

This projector provides a function which can be specified a defective area simply by indicating the LEDs on the control panel. Connect the AC cord and press the Power button once and then check the LED indication.

**- When all the LED indicators are not lighting,** the symptom indicates that the primary power supply circuit does not operate properly. Check the power primary circuit and parts as follow;

AC cord
F601 (Fuse)
Power board
SW902 (Thermal sw.) .....short in normal
SW902 opens when the surrounding temperature of the switch exceeds 100°C.

**- When the WARNING(red) and POWER(red) indicators are flashing,** the symptom indicates that the projector detected an abnormal temperature risen inside the projector. Check the air filters and remove the object near the intake and exhaust fan openings, and wait until the POWER indicator stops flashing, and then try to turn on the projector.

The internal temperature is monitored by sensor ICs, IC8821 on Sensor Board, IC8801 and IC8802 on Main Board.

**- When the WARNING (red) indicator lights**, the symptom indicates that the projector detected an abnormality in the cooling fan operation or in the power supply secondary circuits. Check fan operation and power supply lines, and the driving signal status.

An abnormality occurs on the secondary power supply lines.
Power failure detection diodes detect abnormal voltage on the power supply circuits.
POWER_FAIL (Error:L) signals are sent to pin 174 of IC301(System Controller) via IC1871(Comparator).
Check the shortage of secondary circuits, ICs, condensers, etc.
Check power supply lines, 15VP, 9V, 3.3V and 1.8V on the Main Board.

An abnormality occurs on the fan control circuits.
Power failure detection diodes detect the fan operation stop. Check FN901, FN902, FN903, FN904, FN905, FN906 and peripheral circuit.
Check fan's power supply lines and detection diodes D5612, D5619 and D5624.
Check fan lock signal(Lock:H) and Q5611, D5622 and peripheral circuit.

An abnormality occurs on power starter signals (FAN_SW, 5V_SW, ON_15V).
FAN_SW signal (Power-on:H) is output from pin 19 of IC1802 and applied to the Power Board. It drives the power oscillation circuit and power supply for the cooling fans in Power Board.
5V_SW signal(Power-on:H) is output from pin 74 of IC301 and sent to Q3582, then 5VA line is supplied.
ON_15V signal(Power-on:H) is output from pin 72 of IC301 and sent to Q2501, then 15VL line is supplied.

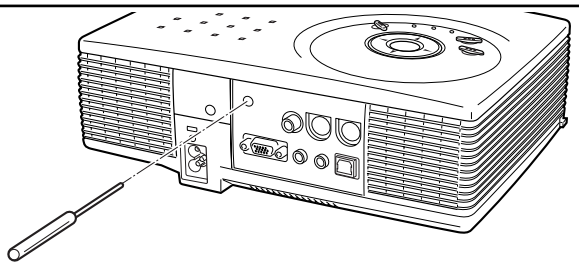
An abnormality occurs on Lamp drive signal (LAMP_POW, LAMP_ERR).
- LAMP_POW signal(Power-on:H) is output from pin 140 of IC301 and sent to IC1882 via IC4801.
  SCEL signal(Lamp-on:L) is output from pin 4 of IC4801 via IC1881 and sent to Lamp Ballast Unit through SW8801(Lamp Cover SW).
- TXL signal is output from pin 3 of IC1882 and sent to Lamp ballast Unit via IC1881.
  (TXL signal is applied for lamp power control. Lo: Low power, Hi: High power)
- RXL signal(Lamp status signal) is output from Lamp Ballast Unit and sent to pin 4 of IC1882 via IC1881, then LAMP_ERR signal is output from pin 7 of IC1882 and sent to IC301 via IC1811.
  If an abnormality occurred on the lamp ballast unit, RXL signal and LAMP_ERR signal become "H" and then IC301 shuts down the power supply circuit.

### Lamp cover switch

Make sure that the lamp cover is mounted correctly. If not or the lamp cover removed, the lamp does not light on for the safety. Check the lamp cover and lamp cover switch (SW8801).

### Reset switch

The microprocessor inside the projector may occasionally malfunction and does not allow any controls. In this case, press the reset switch on the rear panel with a sharp tool to restart the projector.



## ● No Picture

Check following steps.

**No picture with all of input sources** — Yes →
Check signal processing stage and LCD driving stage;
Check RGB S&H signals at test points TPR1, TPG1, TPB1.
Check NRS signals at test points TP2531 and TP2561.
Check power supply circuit 15VP and peripheral circuit.
Check ICs IC501, IC531, IC561, IC3531, IC401, IC9401, IC301 and peripheral circuit.

No ↓

**No picture with Computer RGB input source** — Yes →
Check PC source selecting stage;
Check IC5201 and peripheral circuit on the AV board.
RGB signals are selected at RIN1/GIN1/BIN1 of IC5201 and sent to IC8201, A/D converter IC.
Check RGB signals at test points TP6202R/G/B.
H/V sync signal is output from IC5201 and sent to IC301 through IC5301 and IC5303.
GSYNC signal of the source without H/V sync signals is output from IC5201, and sent to IC5301 and IC5302, then sync separated signals are sent to IC301 through IC5303.
PC/AV_SW signal is applied on IC5303, output from pin 14 of IC3551 for selecting sync signals.
Check H/V_SYNC signal at test points TPGHS/TPGVS.

No ↓

**No picture with Computer RGB(Scart) input source** — Yes →
Check PC source selecting stage;
RGB(Scart) signals are sent to IC101, Video decoder IC.
Check RGB signals at pin 3, 2 and 1 of IC101.
CV_SCART signal for sync is sent to pin 72 of IC101.
Check CV_SCART signal and test points TPVHS/TPVVS.

No ↓

**No picture with S-VIDEO input source** — Yes →
Check AV source selecting stage;
Check S-video signal (Y/C) on the AV and Main board.
Check IC101, Video decoder, and peripheral circuit.
S_SW signal (S-Video cable is connected:L) is applied on pin 9 of IC1811.

No ↓

**No picture with Component input source** — Yes →
Check AV/PC source selecting stage;
Check component signal (Y/Cr,Pr/Cb,Pb) on the AV and Main board.
Component signals (480i/575i format) are sent to IC101 directly.
Component signals (480p/575p format) are selected at RIN2/GIN2/BIN2 of IC5201 and other HDTV format signals are selected at RIN1/GIN1/BIN1 of IC5201, and then sent to IC8201.
Check IC5201, IC8201, IC101 and peripheral circuit.
Sync signals of 480i/575i format signal are output from IC101.
Sync signals of other format signals are output from IC5302.
Check H/V_sync signal at test points TPGHS/TPGVS/TPVHS/TPVVS.

No ↓

**No picture with video input source** — Yes →
Check AV source selecting stage;
Check composite video signal (Video) on the AV and Main board.
Check IC101, Video decoder, and peripheral circuit.

## ● No Sound

Check following steps.

**Is the audio signal observed at pins 3 and 13 of IC5001?**

No → Check AUD_PC/AV switching circuit.
Check IC5001, audio-sw IC, and peripheral circuit. AUD_PC/AV_SW (PC:H) signal is applied on pin 10 of IC5001 through Q5003, sent from pin 12 of IC3551.

Yes ↓

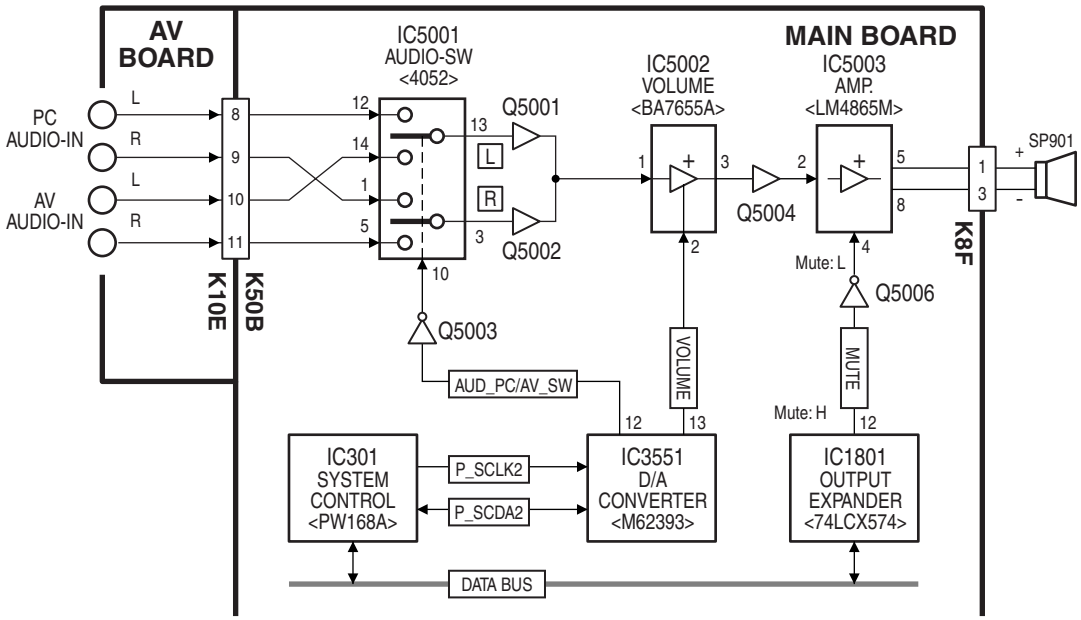
**Is the audio signal observed at pins 5 and 8 of IC5003?**

No → Check Audio amp.and control circuit.
Check IC5003, audio-amp IC, and peripheral circuit.
MUTE signal (Mute:L) is applied on pin 4 of IC5003, sent from pin 12 of IC1801.
VOLUME signal is applied on pin 2 of IC5002., sent from pin 13 of IC3551.
Check 5V_AUD power supply line.

Yes ↓

Check audio output circuit.
Check speaker, connection of the terminal “K8F”.

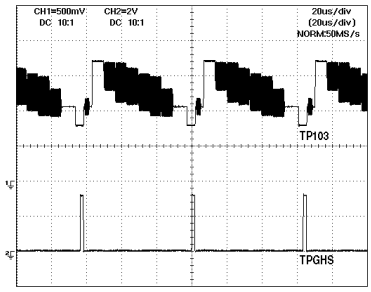
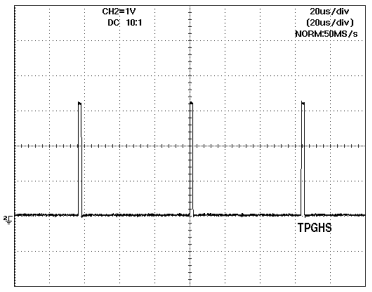
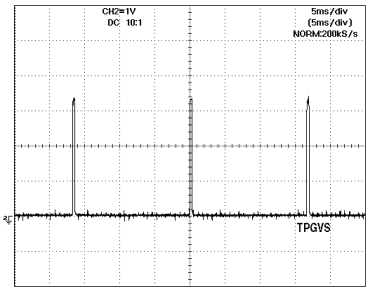
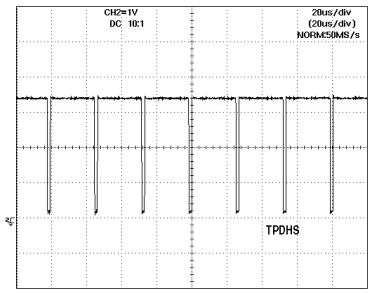
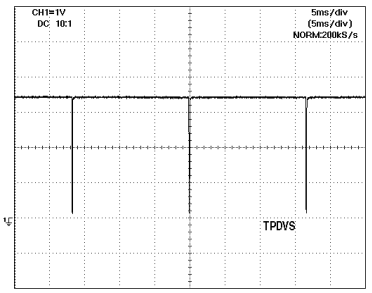
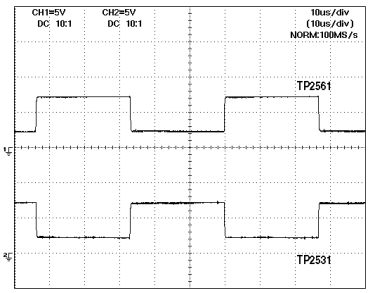
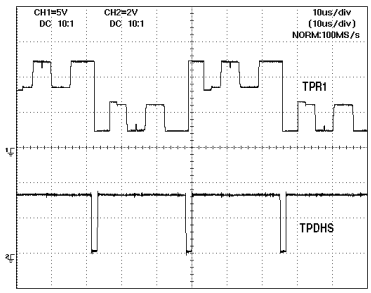
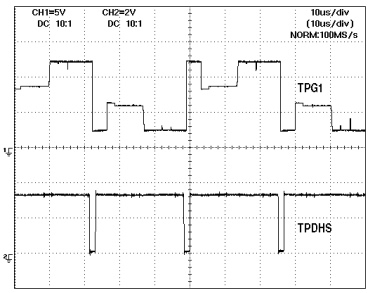
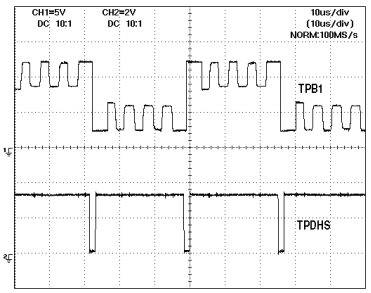
## ● Audio signal processing circuit




AUDIO-SW Switching Logic

| | PC | AV |
|---|---|---|
| AUD_PC/AV_SW at IC3551 | H | L |
| AUD_PC/AV_SW at IC5001 | L | H |

# ■ Waveforms

| VIDEO-IN <TP103, IC101-75> | Analog H-SYNC <TPGHS> | Analog V-SYNC <TPGVS> |
|---|---|---|
|  |  |  |
| **Digital H-SYNC <TPDHS>** | **Digital V-SYNC <TPDVS>** | **NRS <TP2531,TP2561>** |
|  |  |  |
| **R-S&H OUT <TPR1>** | **G-S&H OUT <TPG1>** | **B-S&H OUT <TPB1>** |
|  |  |  |

# ■ Control Port Functions

## ● System Control & I/O Port Table (IC301)

| Pin No. | Name | Function Name | Function | Polarity | I/O |
|---|---|---|---|---|---|
| 178 | Port A7 | LAMP_PWM | PWM Output to Sub-CPU | PWM | O |
| 115 | Port A6 | MUPO_ON | | | I |
| 44 | Port A5 | M_SCL1 | | | I/O |
| 116 | Port A4 | M_SDA1 | | | O |
| 45 | Port A3 | M_SCL2 | | | I/O |
| 46 | Port A2 | M_SDA2 | | | O |
| 117 | Port A1 | SCLK | 3 Line Serial Bus Clock | | O |
| 180 | Port A0 | SDATA | 3 Line Serial Bus Data | | O |
| 173 | Port B7 | NMI | Reset SW Input | | I |
| 111 | Port B6 | IRM_STB | 3 Line Serial Bus Strobe | | O |
| 40 | Port B5 | 3L_EN | 3 Line Serial Bus Enable | | O |
| 174 | Port B4 | POWER_FAIL | Power Fail Detection | Error = L | I |
| 41 | Port B3 | A23 | Address Bus 23 | | |
| 175 | Port B2 | A22 | Address Bus 22 | | |
| 112 | Port B1 | A21 | Address Bus 21 | | |
| 229 | Port B0 | A20 | Address Bus 20 | | |
| 71 | Port E7 | 5V_SW | Standby 5V OFF | Standby = L | O |
| 139 | Port E6 | DCLK_SW | | | O |
| 200 | Port E5 | VHDPEN | IC101 Video Decoder Enable | | O |
| 140 | Port E4 | LAMP_POW | Lamp ON to Sub-CPU | Lamp-ON = H | O |
| 201 | Port E3 | USB_VBUS | USB Connector Detection | Not used | I |
| 141 | Port E2 | USB_RST | USB Device Reset Output | | O |
| 72 | Port E1 | ON_15V | Standby 15V OFF | Standby = L | O |
| 142 | Port E0 | USB_EN | USB Device Enable Output | | O |
| 119 | Port F7 | IRRCVR1 | IR Receiver Input 1 | Not used | I |
| 182 | Port F6 | IRRCVR0 | IR Receiver Input 0 | | I |
| 47 | Port F5 | RXD | | | I |
| 182 | Port F4 | TXD | | | O |
| 189 | Port F3 | CS0 | I/O Expander Chip Select (Output) | | O |
| 55 | Port F2 | CS1 | I/O Expander Chip Select (Input) | | O |
| 207 | Port F1 | DCLKEXT | D-port Clock External Input | Not used | I |
| 257 | Port F0 | MCLKEXT | Memory System Clock Input | Not used | I |
| 194 | A19 | A19 | Address Bus 19 | | |
| 63 | A19 | A18 | Address Bus 18 | | |
| 132 | A17 | A17 | Address Bus 17 | | |
| 62 | A16 | A16 | Address Bus 16 | | |
| 61 | A15 | A15 | Address Bus 15 | | |
| 131 | A14 | A14 | Address Bus 14 | | |
| 193 | A13 | A13 | Address Bus 13 | | |
| 247 | A12 | A12 | Address Bus 12 | | |
| 60 | A11 | A11 | Address Bus 11 | | |
| 246 | A10 | A10 | Address Bus 10 | | |
| 59 | A9 | A9 | Address Bus 9 | | |
| 130 | A8 | A8 | Address Bus 8 | | |
| 129 | A7 | A7 | Address Bus 7 | | |
| 192 | A6 | A6 | Address Bus 6 | | |
| 128 | A5 | A5 | Address Bus 5 | | |
| 58 | A4 | A4 | Address Bus 4 | | |
| 191 | A3 | A3 | Address Bus 3 | | |
| 190 | A2 | A2 | Address Bus 2 | | |
| 245 | A1 | A1 | Address Bus 1 | | |
| 244 | A0 | A0 | Address Bus 0 | | |
| 242 | D15 | D15 | Data Bus 15 | | I/O |
| 241 | D14 | D14 | Data Bus 14 | | I/O |
| 187 | D13 | D13 | Data Bus 13 | | I/O |
| 53 | D12 | D12 | Data Bus 12 | | I/O |
| 124 | D11 | D11 | Data Bus 11 | | I/O |
| 186 | D10 | D10 | Data Bus 10 | | I/O |
| 240 | D9 | D9 | Data Bus 9 | | I/O |
| 123 | D8 | D8 | Data Bus 8 | | I/O |
| 185 | D7 | D7 | Data Bus 7 | | I/O |
| 122 | D6 | D6 | Data Bus 6 | | I/O |
| 51 | D5 | D5 | Data Bus 5 | | I/O |
| 184 | D4 | D4 | Data Bus 4 | | I/O |
| 121 | D3 | D3 | Data Bus 3 | | I/O |
| 50 | D2 | D2 | Data Bus 2 | | I/O |
| 49 | D1 | D1 | Data Bus 1 | | I/O |
| 183 | D0 | D0 | Data Bus 0 | | I/O |
| 127 | RD | RD | Read Enable | Not used | I/O |
| 56 | WR | WR | Write Enable | Not used | I/O |
| 118 | BHEN | BHEN | High Byte Enable | Not used | I/O |

| Pin No. | Name | Function Name | Function | Polarity | I/O |
|---|---|---|---|---|---|
| 188 | ROMOE | ROMOE | ROM Output Enable for Flash ROM | | O |
| 126 | ROMWE | ROMWE | ROM Write Enable for Flash ROM | | O |
| 125 | RAMOE | RAMOE | RAM Output Enable | Not used | O |
| 54 | RAMWE | RAMWE | RAM Write Enable | Not used | O |
| 177 | Port C1 | CS3 | Chip Select 3 | Not used | O |
| 230 | Port C0 | CS2 | Chip Select 2 | Not used | O |
| 238 | EXTINT | EXTINT | External Interrupt Input | | I/O |
| 120 | NMI | - | Non-maskable Interrupt (Not used) | (set L) | I |
| 48 | RESET | RESET | Master Reset Input | | I |
| 233 | ADR24B | ADR24B | 24bit Address Select Input | (set H) | I |
| 133 | MODE3 | NODE3 | Internal Oscillator Enable Enable Input | (set H) | I |
| 290 | MODE2 | MODE2 | Reserved | (set L) | I |
| 248 | MODE1 | MODE1 | Internal MCLK PLL Enable Input | (set H) | I |
| 232 | MODE0 | MODE0 | Internal DCLK PLL Enable Input | (set H) | I |
| | | | | | |

Note : Other functions except for system control are not listed.

## ● IIC Bus D/A Converter (IC3551, M62393FP) Port Functions

| Pin No. | Name | Function | | | I/O |
|---|---|---|---|---|---|
| 1 | R | Reset Input | | | I |
| 2 | SCL | P_SCK2 | IIC BUS SCL | | I |
| 3 | SDA | P_SDA2 | IIC BUS SDA | | I/O |
| 4 | A05 | CG_FILT | | | O |
| 5 | A06 | FILT_480P/575P | | | O |
| 6 | A07 | S/CV_SW | | | O |
| 7 | A08 | Not used | | | O |
| 8 | VrefL | DAC Lower Reference Voltage input | | | - |
| 9 | VrefU 1 | DAC Upper Reference Voltage input (CH5~CH8) | | | - |
| 10 | Vss | GND | | | - |
| 11 | VrefU 2 | DAC Upper Reference Voltage input (CH1~CH 4) | | | - |
| 12 | A01 | AUD_PC/AV_SW | | | O |
| 13 | A02 | VOLUME | | | O |
| 14 | A03 | PC/AV_SW | | | O |
| 15 | A04 | CBAL_SW | Color Correction On/Off | ON = L | O |
| 16 | Vcc | Power Supply for Output Buffer (+5V) | | | - |
| 17 | Vdd | Power Supply +5V | | | - |
| 18 | CS2 | Slave address setting port 2 (GND) | | | I |
| 19 | CS1 | Slave address setting port 1 (GND) | | | I |
| 20 | CS0 | Slave address setting port 0 (GND) | | | I |

## ● IIC Bus D/A Converter (IC3561, M62392FP) Port Functions

| Pin No. | Name | Function | | I/O |
|---|---|---|---|---|
| 1 | R | Reset input | | I |
| 2 | SCL | P_SCK1 | IIC BUS SCL | I |
| 3 | SDA | P_SDA1 | IIC BUS SDA | I/O |
| 4 | A07 | REF_R | Black to black Adjustment (Service mode No.10) | O |
| 5 | A08 | REF_G | AV black level Adjustment (Service mode No.11) | O |
| 6 | A09 | REF_B | AV black level Adjustment (Service mode No.12) | O |
| 7 | A10 | - | Not used | O |
| 8 | A11 | 5V_SUB | Not used | O |
| 9 | A12 | - | Not used | O |
| 10 | VrefL | DAC Lower Reference Voltage input | | - |
| 11 | VrefU1 | DAC Upper Reference Voltage input (CH5~CH8) | | - |
| 12 | Vss | GND | | - |
| 13 | VrefU2 | DAC Upper Reference Voltage input (CH1~CH 4) | | - |
| 14 | A01 | FAN_CONT3 | FN903, FN906 | O |
| 15 | A02 | FAN_CONT2 | FN901, FN904 | O |
| 16 | A03 | FAN_CONT1 | FN902, FN905 | O |
| 17 | A04 | - | Not used | O |
| 18 | A05 | NRSA | NRS Adjustment (Service mode No.20) | O |
| 19 | A06 | NRSB | NRS Adjustment (Service mode No.19) | O |
| 20 | Vcc | Power Supply for Output Buffer (+5V) | | - |
| 21 | Vdd | Power Supply +5V | | - |
| 22 | CS2 | Slave address setting port 2 (Vdd) | | I |
| 23 | CS1 | Slave address setting port 1 (Vdd) | | I |
| 24 | CS0 | Slave address setting port 0 (Vdd) | | I |

## ● IIC Bus D/A Converter (IC3571, M62392FP) Port Functions

| Pin No. | Name | Function | | I/O |
|---|---|---|---|---|
| 1 | R | Reset input | | I |
| 2 | SCL | P_SCK2 | IIC BUS SCL | I |
| 3 | SDA | P_SDA2 | IIC BUS SDA | I/O |
| 4 | A07 | - | Not used | O |
| 5 | A08 | - | Not used | O |
| 6 | A09 | - | Not used | O |
| 7 | A10 | - | Not used | O |
| 8 | A11 | - | Not used | O |
| 9 | A12 | - | Not used | O |
| 10 | VrefL | DAC Lower Reference Voltage input | | - |
| 11 | VrefU1 | DAC Upper Reference Voltage input (CH5~CH8) | | - |
| 12 | Vss | GND | | - |
| 13 | VrefU2 | DAC Upper Reference Voltage input (CH1~CH 4) | | - |
| 14 | A01 | R_V1 | Video signal reference voltage (-) R | O |
| 15 | A02 | R_V2 | Video signal reference voltage (+)R | O |
| 16 | A03 | G_V1 | Video signal reference voltage (-)G | O |
| 17 | A04 | G_V2 | Video signal reference voltage (+)G | O |
| 18 | A05 | B_V1 | Video signal reference voltage (-)B | O |
| 19 | A06 | B_V2 | Video signal reference voltage (+)B | O |
| 20 | Vcc | Power Supply for Output Buffer (+5V) | | - |
| 21 | Vdd | Power Supply +5V | | - |
| 22 | CS2 | Slave address setting port 2 (Vdd) | | I |
| 23 | CS1 | Slave address setting port 1 (Vdd) | | I |
| 24 | CS0 | Slave address setting port 0 (GND) | | I |

## ● Sub CPU (IC1882, PIC12F675) Port Functions

| Pin No. | Name | Function | | | I/O |
|---|---|---|---|---|---|
| 1 | VDD | Power Supply +5V | | | - |
| 2 | GP5/T1CKI | TMR1_CLK | Clock Input | | I |
| 3 | GP4 | TXL | Power switch signal | Low Wattage = L | O |
| 4 | GP3 | RXL | Lamp Status Signal | | I |
| 5 | GP2/T0CKI | LAMP_PWM | APL Level Input | | I |
| 6 | GP1 | SCEL | Lamp ON/OFF Control | Lamp ON = L | O |
| 7 | GP0 | LAMP_ERR | Lamp Error Output | Lamp Error = H | O |
| 8 | GND | - | | | - |

## ● Output Expander (IC1801, TC74LCX574FT) Port Functions

| Pin No. | Name | Function | | | I/O |
|---|---|---|---|---|---|
| 1 | OE | IO_ENB | | | I |
| 2 | D0 | D0 | | | I |
| 3 | D1 | D1 | | | I |
| 4 | D2 | D2 | | | I |
| 5 | D3 | D3 | | | I |
| 6 | D4 | D4 | | | I |
| 7 | D5 | D5 | | | I |
| 8 | D6 | D6 | | | I |
| 9 | D7 | D7 | | | I |
| 10 | GND | GND | | | - |
| 11 | CK | ADD1_CS | Output Port Chip Select | Enable = L | I |
| 12 | Q7 | MUTE | Audio Mute Output | Mute = H | O |
| 13 | Q6 | READY_LED | Ready LED | Ready = H | O |
| 14 | Q5 | LAMP_LED | Lamp Replace LED | Replace = H | O |
| 15 | Q4 | TEMP_LED | Warning Temperature LED | Warning = H | O |
| 16 | Q3 | PWR_LED | AC Power LED | ON = H | O |
| 17 | Q2 | KO3 | KEY Scan Output | | O |
| 18 | Q1 | KO2 | KEY Scan Output | | O |
| 19 | Q0 | KO1 | KEY Scan Output | | O |
| 20 | Vdd | Power Supply +3.3V | | | - |

## ● Output Expander (IC1802, TC74LCX574FT) Port Functions

| Pin No. | Name | Function | | | I/O |
|---|---|---|---|---|---|
| 1 | OE | IO_ENB | | | I |
| 2 | D0 | D0 | | | I |
| 3 | D1 | D1 | | | I |
| 4 | D2 | D2 | | | I |
| 5 | D3 | D3 | | | I |
| 6 | D4 | D4 | | | I |
| 7 | D5 | D5 | | | I |
| 8 | D6 | D6 | | | I |
| 9 | D7 | D7 | | | I |
| 10 | GND | GND | | | - |
| 11 | CK | ADD1_CS | Output Port Chip Select | Enable = L | I |
| 12 | Q7 | ON_3.3V | 3.3V OFF at standby mode | | O |
| 13 | Q6 | TURBO_C | Strobe for Turbo (IC9401) | | O |
| 14 | Q5 | SH_B_ST | Strobe for B sample & hold (IC501) | | O |
| 15 | Q4 | SH_G_ST | Strobe for G sample & hold (IC531) | | O |
| 16 | Q3 | SH_R_ST | Strobe for R sample & hold (IC561) | | O |
| 17 | Q2 | IRM_RS | Reset for IC401 | | O |
| 18 | Q1 | MCLK_SW | Switch for MCLK | | O |
| 19 | Q0 | FAN_SW | Switch for FAN | | O |
| 20 | Vdd | Power Supply +3.3V | | | - |

## ● Input Expander (IC1811, TC74LCX541FT) Port Functions

| Pin No. | Name | Function | | | I/O |
|---|---|---|---|---|---|
| 1 | OE1 | IO_ENB 1 | CS1 | Enable = L (OE1 and OE2) | I |
| 2 | A1 | K11 | KEY Scan Input | | I |
| 3 | A2 | K12 | KEY Scan Input | | I |
| 4 | A3 | K13 | KEY Scan Input | | I |
| 5 | A4 | OPTION1 | Option Resistor 1 | | I |
| 6 | A5 | OPTION2 | Option Resistor 2 | | I |
| 7 | A6 | OPTION3 | Option Resistor 3 | | I |
| 8 | A7 | LAMP_ERR | Lamp Error Input | | I |
| 9 | A8 | S_SW | S-video Detection | | I |
| 10 | GND | GND | | | - |
| 11 | Y8 | D7 | | | O |
| 12 | Y7 | D6 | | | O |
| 13 | Y6 | D5 | | | O |
| 14 | Y5 | D4 | | | O |
| 15 | Y4 | D3 | | | O |
| 16 | Y3 | D2 | | | O |
| 17 | Y2 | D1 | | | O |
| 18 | Y1 | D0 | | | O |
| 19 | OE2 | IO_ENB 2 | | Enable = L (OE1 and OE2) | I |
| 20 | Vdd | Power Supply +3.3V | | | - |

# ■ Cleaning

After long periods of use, dust and other particles will accumulate on the LCD panel, prism, mirror, polarized glass, lens, etc., causing the picture to darken or color to blur. If this occurs, clean the inside of optical unit.

Remove dust and other particles using air spray. If dirt cannot be removed by air spray, disassemble and clean the optical unit.

## Cleaning with air spray

1. Remove the cabinet top following to “Mechanical Disassemblies”.
2. Clean up the LCD panel and polarizing plate by using the air spray from the cabinet top opening.

**Caution:**
Use a commercial (inert gas) air spray designed for cleaning camera and computer equipment. Use a resin-based nozzle only. Be vary careful not to damage optical parts with the nozzle tip. Never use any kind of cleanser on the unit. Also, never use abrasive materials on the unit as this may cause irreparable damage.

## Disassembly Cleaning

Disassembly cleaning method should only be performed when the unit is considerable dirty and cannot be sufficiently cleaned by air spraying alone.
**Be sure to readjust the optical system after performing disassembly cleaning.**

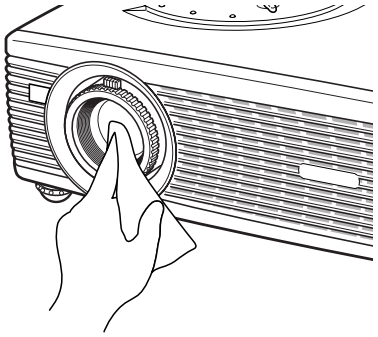
1. Remove the cabinet top and main units following to “Mechanical Disassemblies”.
2. Remove the optical base top following to “Optical Unit Disassemblies”. If the LCD panel needs cleaning, remove the LCD panel unit following to “LCD panel replacement”.
3. Clean the optical parts with a soft cloth. Clean extremely dirty areas using a cloth moistened with alcohol.

**Caution:**
The surface of the optical components consists of multiple dielectric layers with varying degrees of refraction. Never use organic solvents (thinner, etc.) or any kind of cleanser on these components.
Since the LCD panel is equipped with an electronic circuit, never use any liquids (water, etc.) to clean the unit. Use of liquid may cause the unit to malfunction.

## Cleaning the Projection Lens

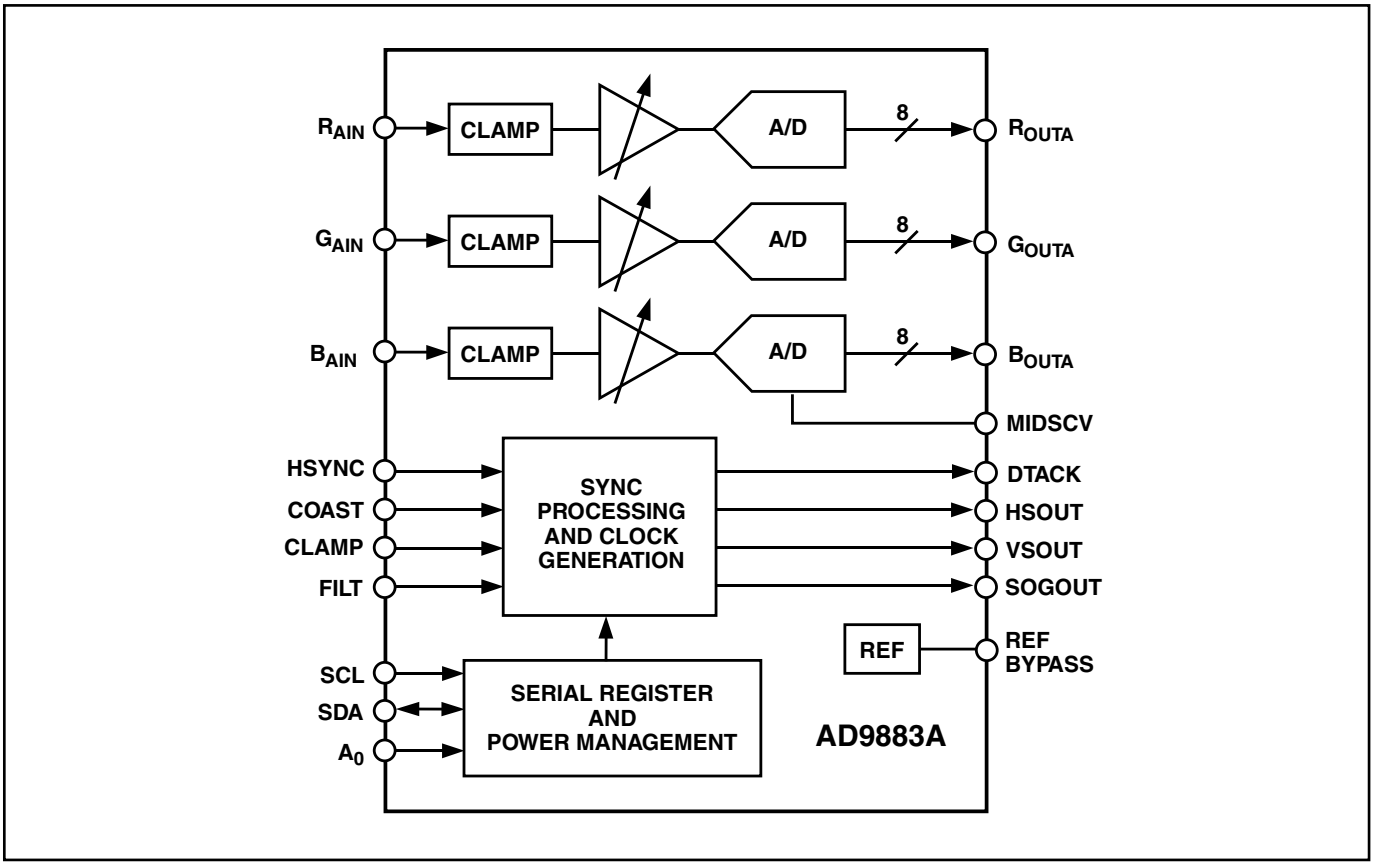
Follow these steps to clean the projection lens:

1. Apply a non-abrasive camera lens cleaner to a soft, dry cleaning cloth. Avoid using an excessive amount of cleaner. Abrasive cleaners, solvents or other harsh chemicals might scratch a surface.
2. Lightly wipe Projection Lens with a cleaning cloth.
3. When the projector is not in use, replace the Lens Cover.

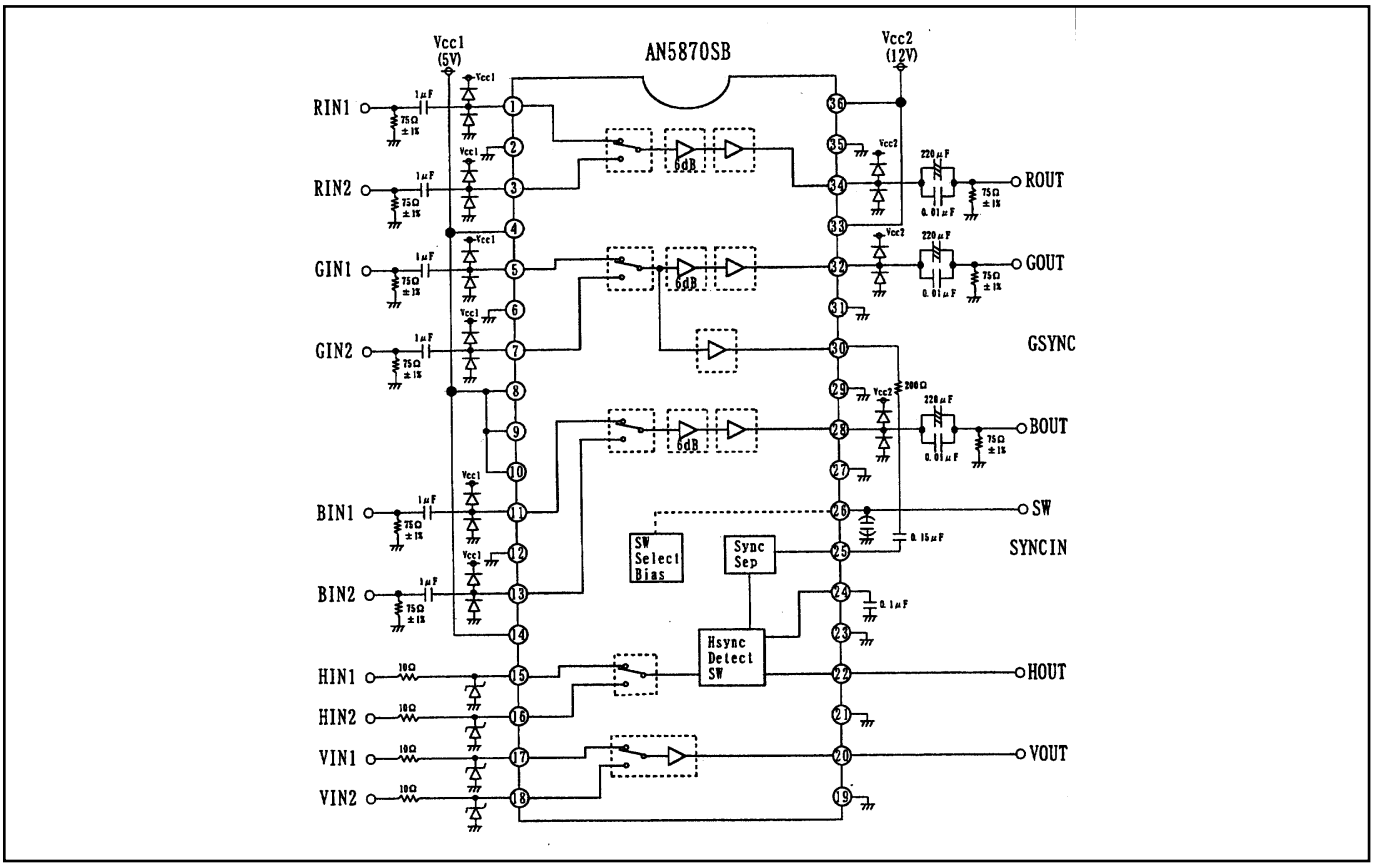


# ■ IC Block Diagrams

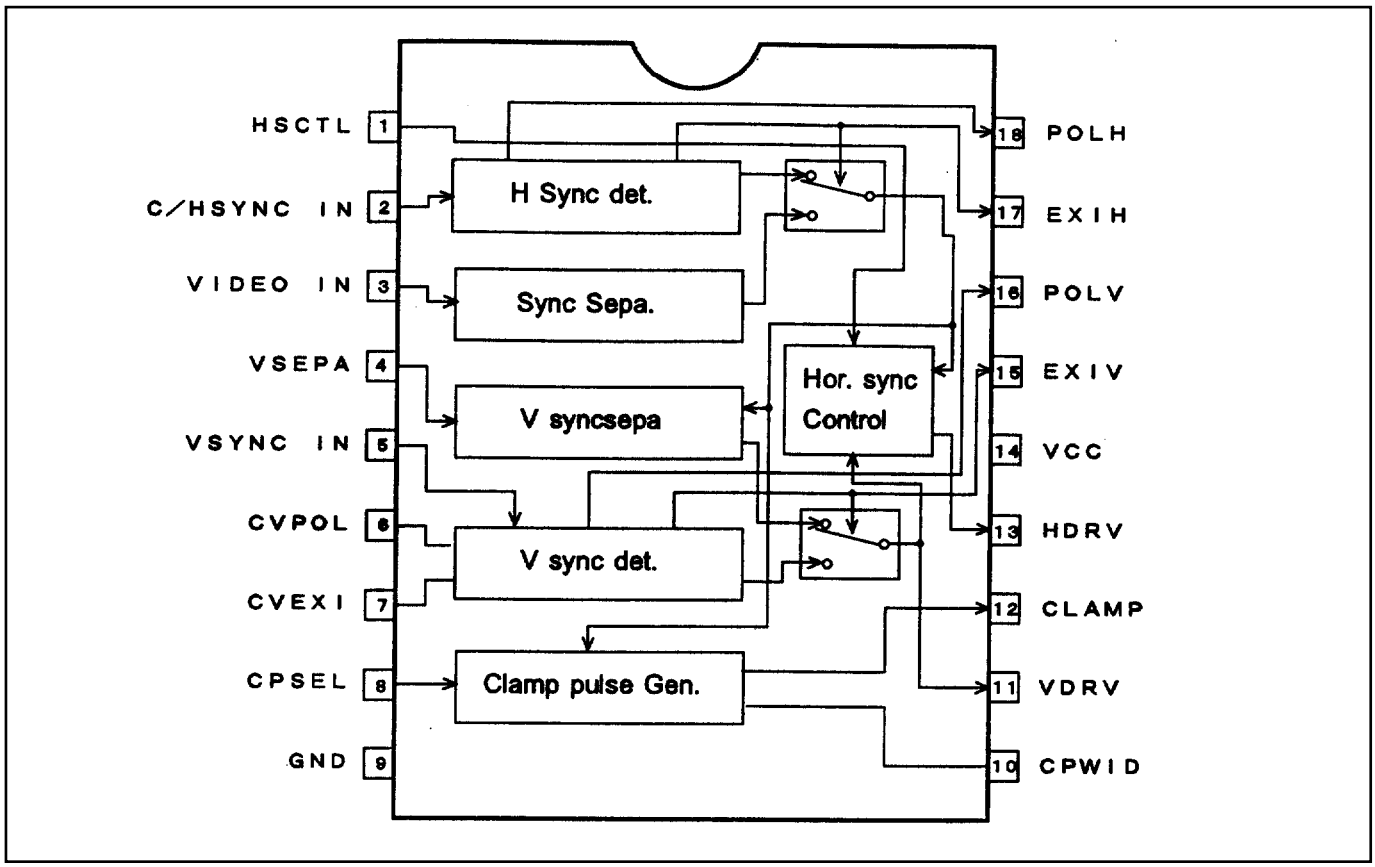
## ● AD9883AKST <Analog Flat Panel Interface, IC8201>



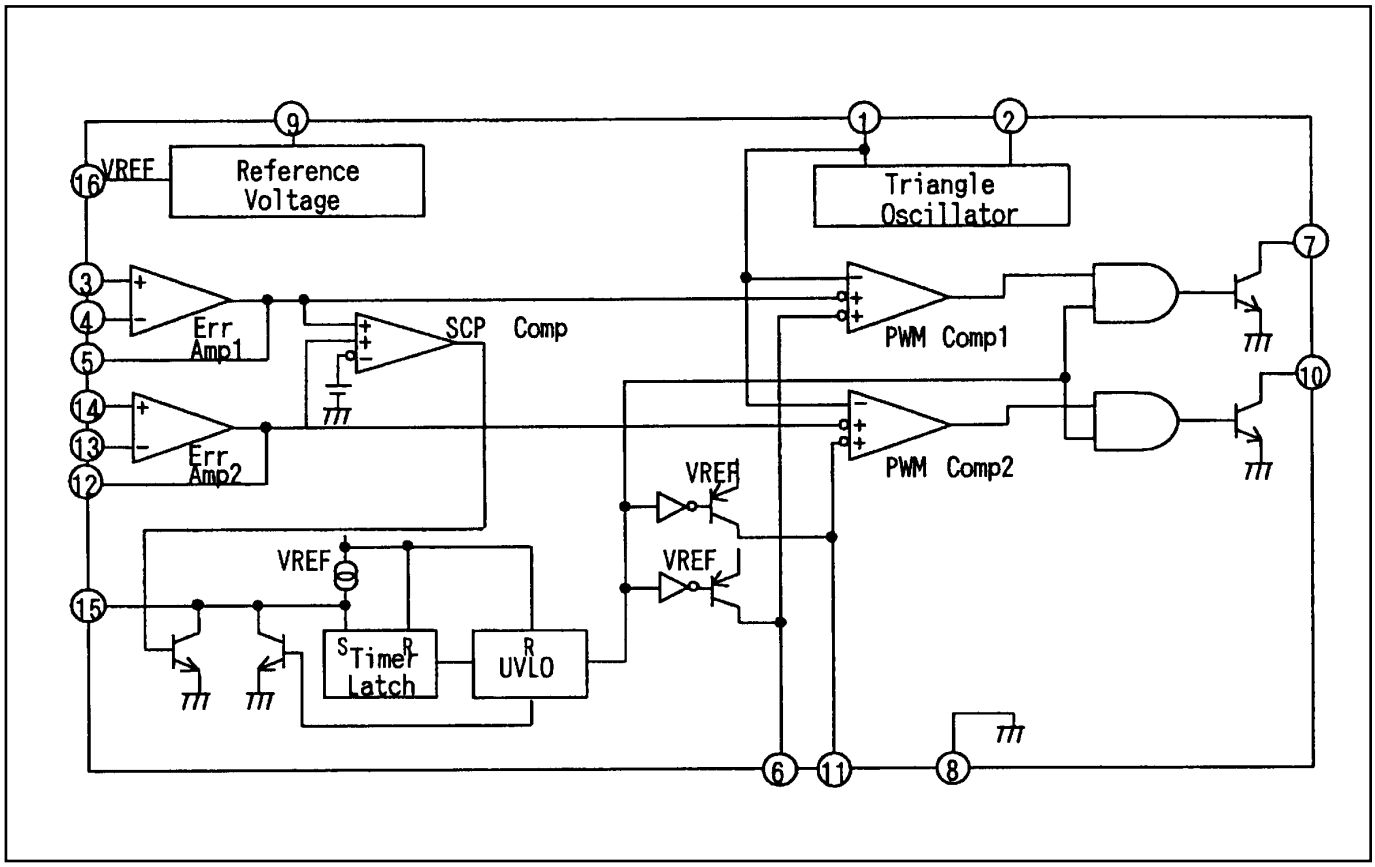

## ● AN5870SB <RGB SW, G_Sync Separator, IC5201>



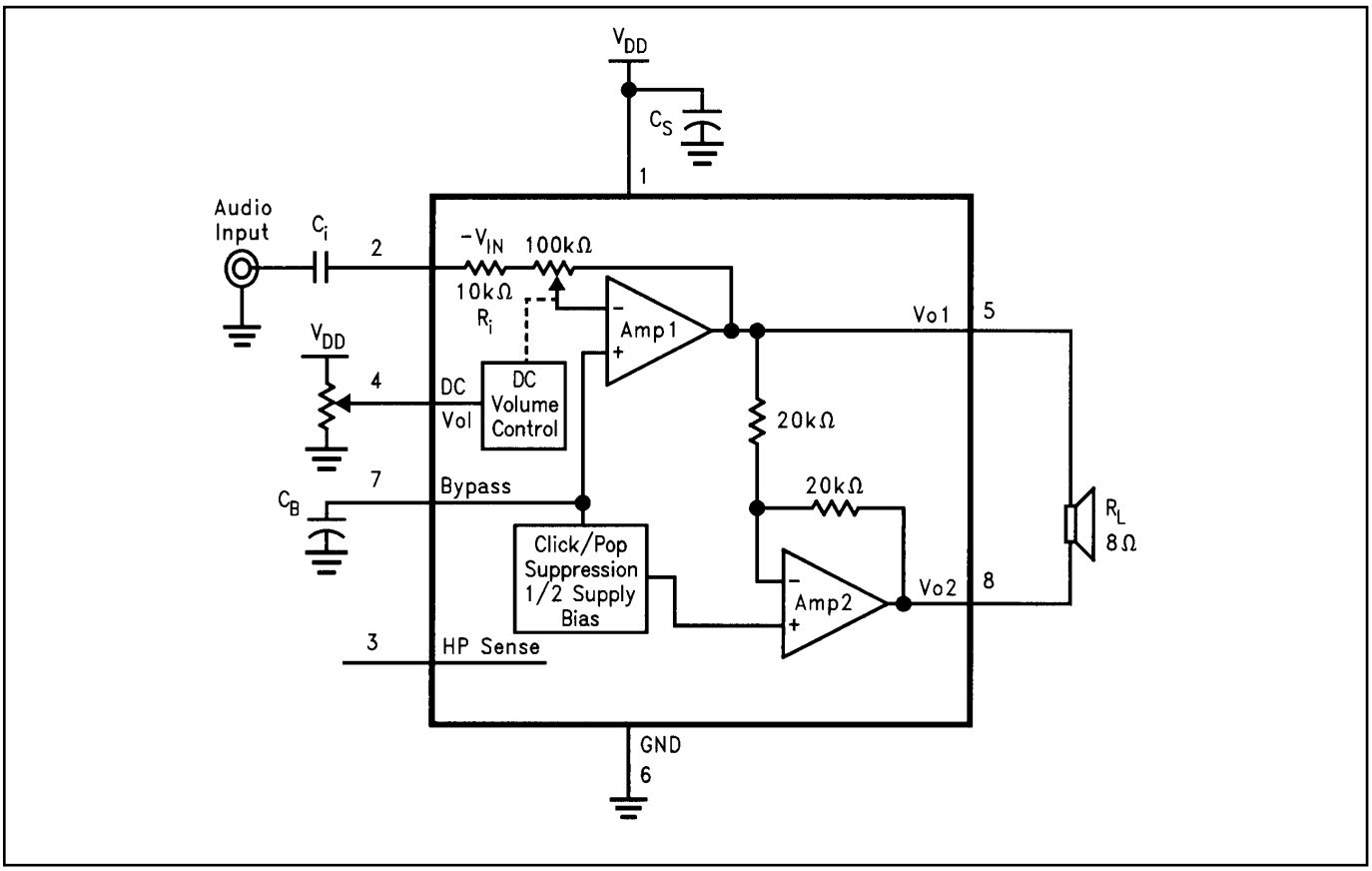
## ● BA7078AF <Sync Detector, IC5301>



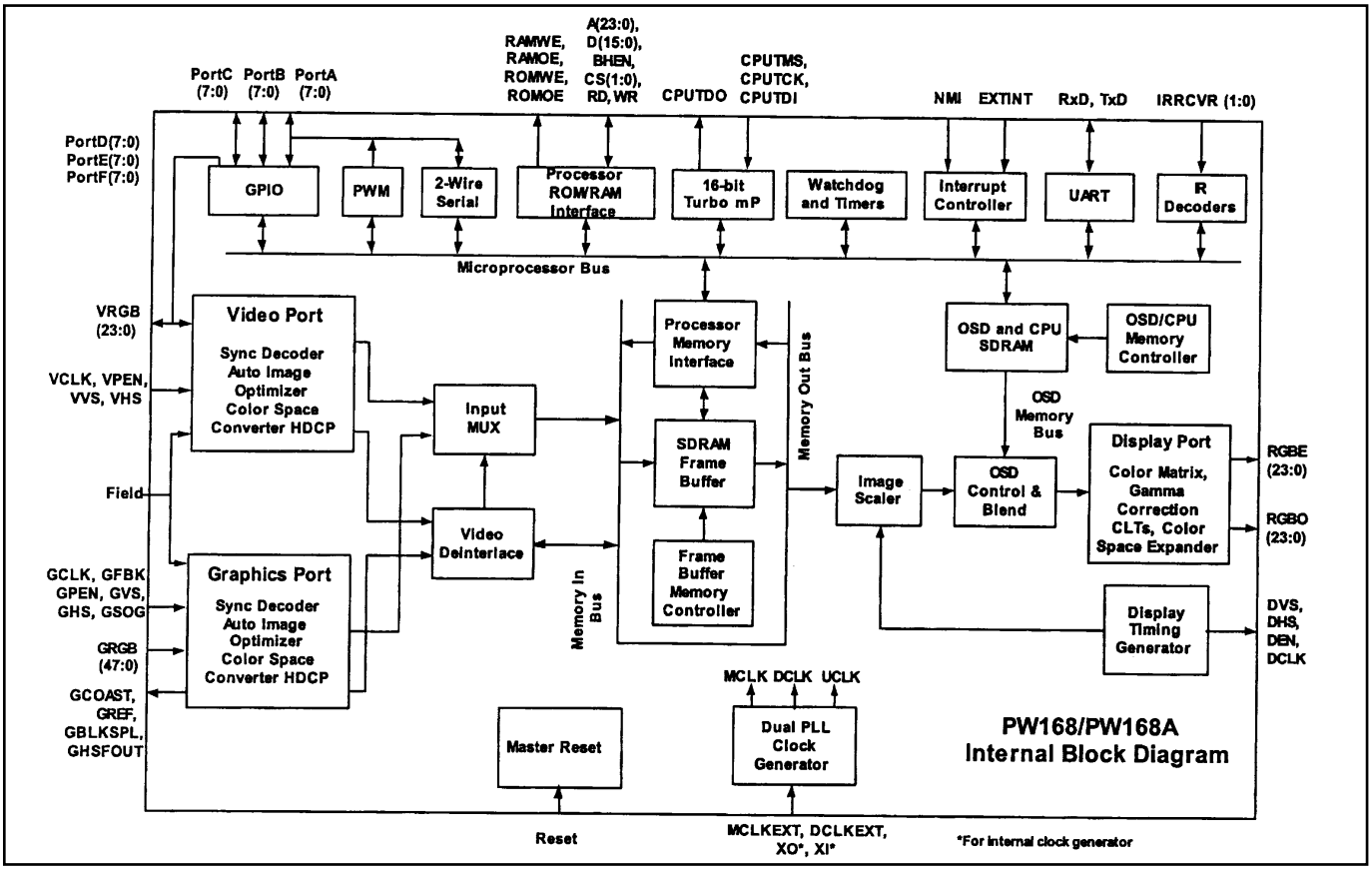

## ● BA9743AFV <DC-DC Converter, IC371>



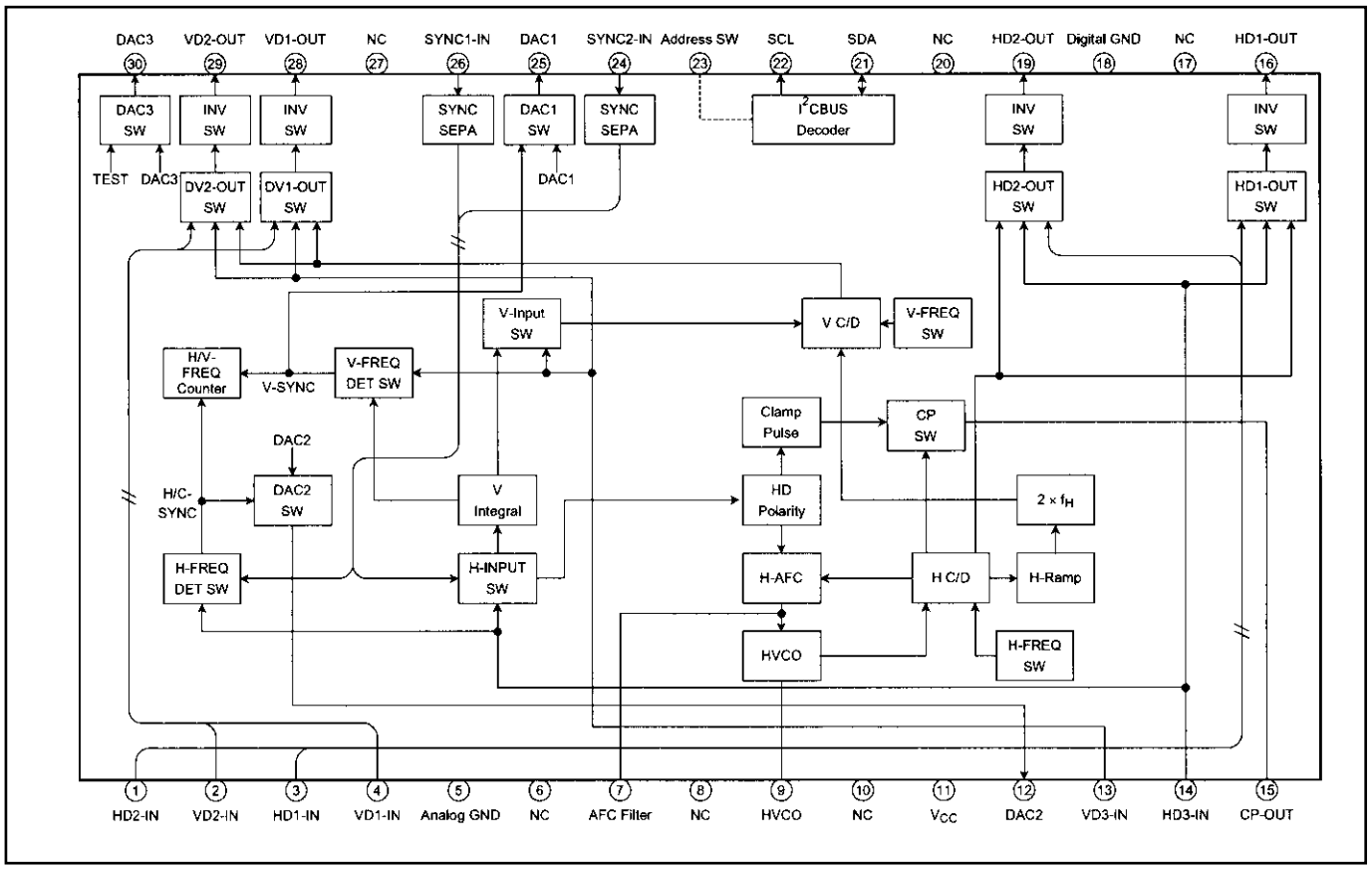
## ● LM4865 <Audio Amplifier , IC5003>



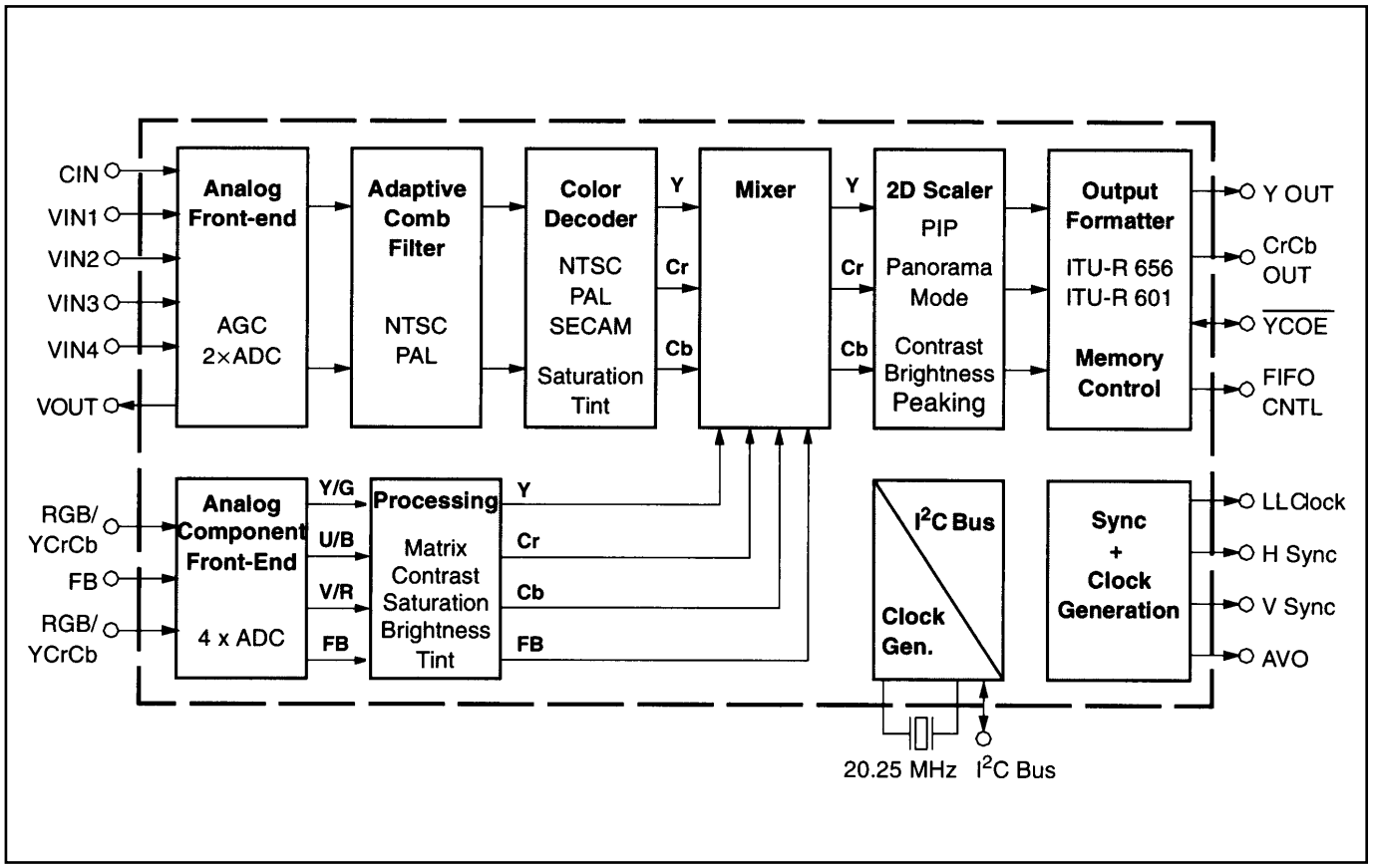

## ● PW168A <Scaler, Main CPU, IC301>



## ● TA1370FG <Sync Separator, Frequency Counter, IC5302>




## ● VPC3230D <Video Decoder, IC101>



# ■ Electrical Parts List

Product safety should be considered when a component replacement is made in any area of a projector.
Components indicated by a ⚠ mark in this parts list and the circuit diagram show components whose value have special significance to product safety. It is particularly recommended that only parts specified on the following parts list be used for components replacement pointed out by the mark.

## ● Read Description in the parts list

Read description in the Capacitor and Resistor as follows:

**CAPACITOR** CERAMIC 100P K 50V

Rated Voltage

Tolerance Symbols:

Less than 10pF

| | | |
|---|---|---|
| A : Not specified | B : ±0.1pF | C : ±0.25pF |
| D : ±0.5pF | E : +0 -1pF | F : ±1PF |
| G : ±2pF | H : +0.1 -0pF | L : +0 -0.1pF |
| R : ±0.25 -0pF | S : +0-0.25pF | |

More than 10pF

| | | |
|---|---|---|
| A : Not specified | B : ±0.1% | C : ±0.25% |
| D : ±0.5% | F : ±1% | G : ±2% |
| H : ±3% | J : ±5% | K : ±10% |
| L : ±15% | M : ±20% | N : ±30% |
| P : +100-0% | Q : +30-10% | T : +50-10% |
| U : +75-10% | V : +20-10% | W : +100-10% |
| X : +40-20% | Y : +150-10% | Z : +80-20% |

Rated value: P=pico farad, U=micro farad

Material:

| | |
|---|---|
| CERAMIC | Ceramic |
| MT-PAPER | Metallized Paper |
| POLYESTER | Polyester |
| MT-POLYEST | Metallized Polyester |
| POLYPRO | Polypropylene |
| MT-POLYPRO | Metallized Polypropylene |
| COMPO FILM | Composite film |
| MT-COMPO | Metallized Composite |
| STYRENE | Styrene |
| TA-SOLID | Tantalum Oxide Solid Electrolytic |
| AL-SOLID | Aluminium Solid Electrolytic |
| ELECT | Aluminum Foil Electrolytic |
| NP-ELECT | Non-polarised Electrolytic |
| OS-SOLID | Aluminium Solid with Organic Semiconductive Electrolytic |
| POS-SOLID | Polymerized Organic Semiconductive |
| DL-ELECT | Double Layered Electrolytic |
| PPS-FILM | Polyphenylene Sulfide Film |
| MT-PPS-FILM | Metalized Polyphenylene Sulfide Film |
| MT-PEN-FILM | Metalized Polyethylenenaphthalate Film |
| CAPACITOR | Other |

**RESISTOR** CARBON 4.7K J A 1/4W

Rated Wattage

Performance Symbols:
A: General B: Non flammable Z: Low noise
Other: Temperature coefficient

| | | |
|---|---|---|
| T: ±10ppm/°C | U: ±25ppm/°C | C: ±50ppm/°C |
| D: ±100ppm/°C | E: ±200ppm/°C | F: ±250ppm/°C |
| G: ±350ppm/°C | H: ±1000ppm/°C±10% | W: ±1200ppm/°C±10% |
| Y: ±1400ppm/°C±10% | J: ±2000ppm/°C±10% | K: ±2400ppm/°C±10% |
| L: ±2700ppm/°C±10% | M: ±3000ppm/°C±10% | N: ±3300ppm/°C±10% |
| P: ±3600ppm/°C±10% | Q: ±3900ppm/°C±10% | R: ±4200ppm/°C±10% |
| S: ±4300ppm/°C±10% | V: ±4500ppm/°C±10% | X: ±8000ppm/°C±10% |

Tolerance Symbols:
A: ±0.05% B: ±0.1% C: ±0.25% D: ±0.5%
F: ±1% G: ±2% J: ±5% K: ±10%
M: ±20% P: +5-15% Z: 0 ohm

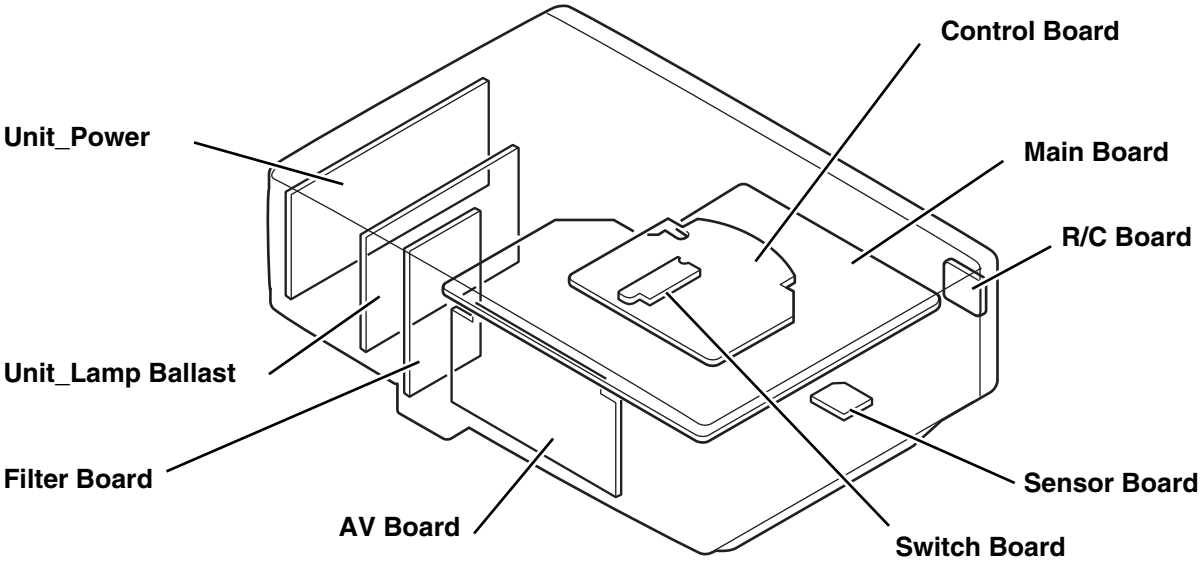
Rated value, ohms:
K: 1,000, M: 1,000,000

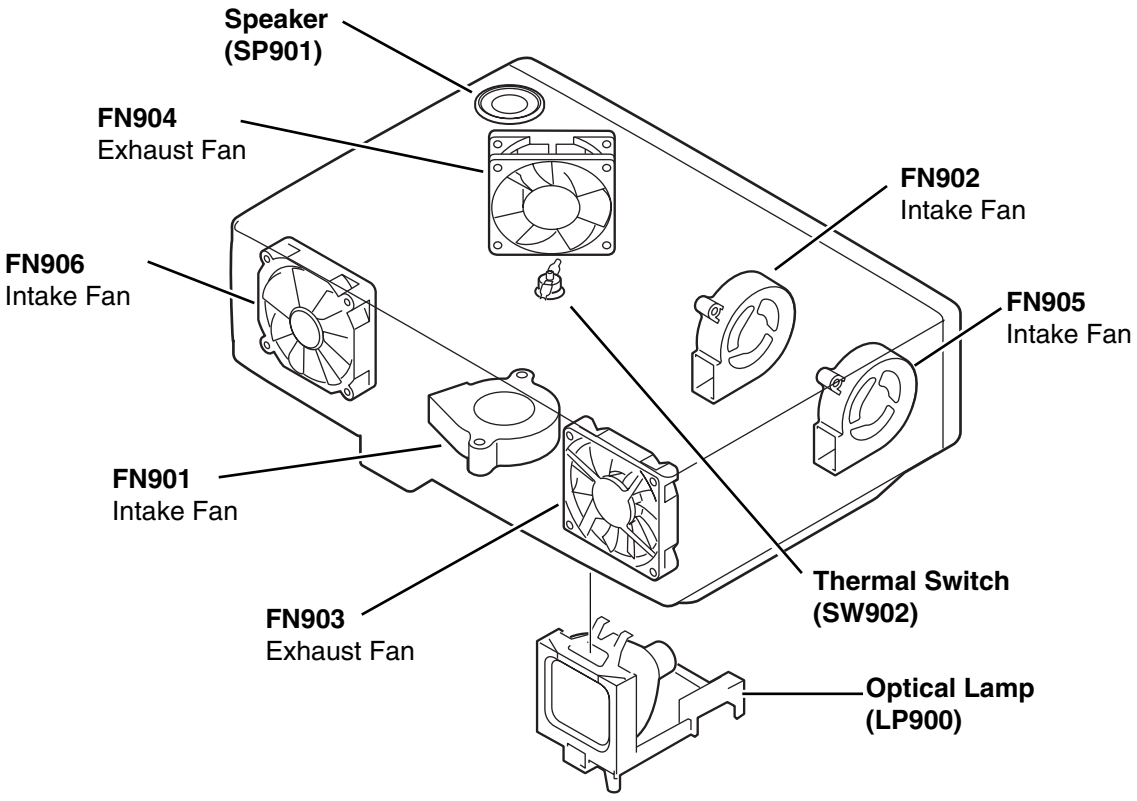
Material:

| | |
|---|---|
| CARBON | Carbon |
| MT-FILM | Metal Film |
| OXIDE-MT | Oxide Metal Film |
| SOLID | Composition |
| MT-GLAZE | Metal Glaze |
| WIRE WOUND | Wire Wound |
| CERAMIC RES. | Ceramic |
| FUSIBLE RES. | Fusible |
| RESISTOR | Other |

**Note: Parts order must contain Chassis No., Part No., and Descriptions.**

## ● OUT OF CIRCUIT BOARD



| Key No. | Part No. | Description |
|---|---|---|
| **ASSEMBLIED BOARDS** | | |
| ⚠ | 610 306 8992 | ASSY,PWB,MAIN,- MP3A |
| ⚠ | 610 306 9005 | ASSY,PWB,R/C- MP3A |
| ⚠ | 610 306 9012 | ASSY,PWB,SENSOR- MP3A |
| ⚠ | 610 306 9029 | ASSY,PWB,A/V -MP3A |
| ⚠ | 610 306 9036 | ASSY,PWB,CONT-MP3A |
| ⚠ | 610 308 1021 | ASSY,PWB,FILTER -MP3A |
| ⚠ | 610 308 1038 | ASSY,PWB,SW-MP3A |
| **OUT OF CIRCUIT BOARDS** | | |
| ⚠LP900 | 610 308 3117 | COMPL,OPTICAL LAMP-MP3A |
| L901 | 645 040 2593 | CORE,FERRITE |
| ⚠A601 | 645 061 0080 | UNIT,POWER |
| ⚠A901 | 645 061 0097 | UNIT,BALLAST |
| ⚠FN901 | 645 061 8604 | MOTOR,FAN DC 2.4W |
| ⚠FN902 | 645 061 8611 | MOTOR,FAN DC 2.30W |
| ⚠FN903 | 645 061 8666 | MOTOR,FAN DC 2.04W |
| ⚠FN904 | 645 061 8642 | MOTOR,FAN DC 2.16W |
| ⚠FN905 | 645 061 8611 | MOTOR,FAN DC 2.30W |
| ⚠FN906 | 645 061 8659 | MOTOR,FAN DC 1.92W |
| SP901 | 645 063 1504 | SPEAKER,8 |
| ⚠SW902 | 645 048 3158 | SWITCH,THERMAL |
| WK48K | 645 043 5645 | CORD,ID CONNECTOR |
| WK48L | 645 065 3513 | CORD,ID CONNECTOR |
| WK8A | 645 064 9905 | CORD,ID CONNECTOR |
| WK8B | 645 065 4756 | CORD,ID CONNECTOR |
| WK8E | 645 040 3156 | CORD,ID CONNECTOR |
| WK8H | 645 064 1794 | CORD,ID CONNECTOR |
| **MAIN BOARD** | | |
| **610 306 8992** | **ASSY,PWB,MAIN,- MP3A** | |
| TRANSISTOR | | |
| Q101 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q1841 | 405 045 8705 | TR 2SK536-TB |
| Q1842 | 405 045 8705 | TR 2SK536-TB |
| Q1843 | 405 045 8705 | TR 2SK536-TB |
| Q1844 | 405 045 8705 | TR 2SK536-TB |
| Q2501 | 405 002 8304 | TR 2SA1203-Y-TE12L |
| Q2502 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q301 | 405 045 8705 | TR 2SK536-TB |
| Q3501 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q3502 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q3581 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q3582 | 405 002 8304 | TR 2SA1203-Y-TE12L |
| Q371 | 406 017 8402 | TR RTQ025P02-TR |
| Q372 | 406 017 8402 | TR RTQ025P02-TR |
| Q4001 | 405 134 5905 | TR 2SA1037AK-T146-R |
| | 405 147 2205 | TR 2SA1037AK-S-T146 |
| | 405 002 0308 | TR 2SA1037K T146 R |
| | 405 002 0407 | TR 2SA1037K T146 S |
| | 405 002 6706 | TR 2SA1179-M6-TB |
| | 405 002 6904 | TR 2SA1179-M7-TB |
| | 405 163 1503 | TR 2SA1179N-M6-TB |
| | 405 163 2708 | TR 2SA1179N-M7-TB |
| Q4807 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q5001 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q5002 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q5003 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q5004 | 405 134 5905 | TR 2SA1037AK-T146-R |
| | 405 147 2205 | TR 2SA1037AK-S-T146 |
| | 405 002 0308 | TR 2SA1037K T146 R |
| | 405 002 0407 | TR 2SA1037K T146 S |
| | 405 002 6706 | TR 2SA1179-M6-TB |
| | 405 002 6904 | TR 2SA1179-M7-TB |
| | 405 163 1503 | TR 2SA1179N-M6-TB |
| | 405 163 2708 | TR 2SA1179N-M7-TB |
| Q5006 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q5301 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q5302 | 405 134 5905 | TR 2SA1037AK-T146-R |
| | 405 147 2205 | TR 2SA1037AK-S-T146 |
| | 405 002 0308 | TR 2SA1037K T146 R |
| | 405 002 0407 | TR 2SA1037K T146 S |

Electrical Parts List

| Key No. | Part No. | Description |
|---|---|---|
| | 405 002 6706 | TR 2SA1179-M6-TB |
| | 405 002 6904 | TR 2SA1179-M7-TB |
| | 405 163 1503 | TR 2SA1179N-M6-TB |
| | 405 163 2708 | TR 2SA1179N-M7-TB |
| Q5341 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q5342 | 405 134 5905 | TR 2SA1037AK-T146-R |
| | 405 147 2205 | TR 2SA1037AK-S-T146 |
| | 405 002 0308 | TR 2SA1037K T146 R |
| | 405 002 0407 | TR 2SA1037K T146 S |
| | 405 002 6706 | TR 2SA1179-M6-TB |
| | 405 002 6904 | TR 2SA1179-M7-TB |
| | 405 163 1503 | TR 2SA1179N-M6-TB |
| | 405 163 2708 | TR 2SA1179N-M7-TB |
| Q5343 | 405 134 5905 | TR 2SA1037AK-T146-R |
| | 405 147 2205 | TR 2SA1037AK-S-T146 |
| | 405 002 0308 | TR 2SA1037K T146 R |
| | 405 002 0407 | TR 2SA1037K T146 S |
| | 405 002 6706 | TR 2SA1179-M6-TB |
| | 405 002 6904 | TR 2SA1179-M7-TB |
| | 405 163 1503 | TR 2SA1179N-M6-TB |
| | 405 163 2708 | TR 2SA1179N-M7-TB |
| Q5344 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q5346 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q5611 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| T371 | 405 139 7706 | TR IMZ1A-T108 |
| T372 | 405 139 7706 | TR IMZ1A-T108 |
| INTEGRATED CIRCUIT | | |
| IC101 | 410 401 4604 | IC VPC3230D-QA-B3 |
| IC102 | 409 416 6406 | IC BA033FP-E2 |
| IC1801 | 410 346 8804 | IC TC74LCX574FT |
| IC1802 | 410 346 8804 | IC TC74LCX574FT |
| IC1811 | 410 362 6501 | IC TC74LCX541FT |
| IC1812 | 409 520 5609 | IC TC7WZ32FU |
| IC1813 | 409 155 8006 | IC TC7S04F-TE85L |
| IC1821 | 410 362 6501 | IC TC74LCX541FT |
| IC1841 | 409 533 6006 | IC 24LC32AT-I/SN |
| IC1861 | 410 337 0602 | IC HD74LVC14T |
| IC1871 | 409 347 5400 | IC M51204FP-600C |
| IC1881 | 409 431 6009 | IC MC74VHC14DT |
| IC1882 | 410 499 0809 | IC PIC12F675-I/SNC322A |
| IC1883 | 409 400 9208 | IC TC7SET32FU-(TE85L) |
| IC1891 | 409 155 8006 | IC TC7S04F-TE85L |
| IC1892 | 409 155 8105 | IC TC7SU04F-(TE85L) |
| IC301 | 409 556 2900 | IC PW168A-10V |
| IC341 | 409 480 1307 | IC PST573IM |
| IC3501 | 409 051 2900 | IC TC4053BF(EL) |
| IC351 | 409 350 2908 | IC TC7W126FU-(TE12L) |
| IC3521 | 409 390 0001 | IC LM7171AIMX |
| | 409 486 7709 | IC LM7171BIMX |
| IC3531 | 409 343 0201 | IC LT1206CS8 |
| IC3551 | 409 458 3401 | IC M62393FP |
| IC3561 | 409 422 5806 | IC M62398FP |
| IC3571 | 409 422 5806 | IC M62398FP |
| IC3591 | 409 246 9717 | IC LA6358NM-TE-L |
| IC361 | 409 520 5609 | IC TC7WZ32FU |
| IC371 | 409 555 6305 | IC BA9743AFV-E2 |
| IC392 | 409 534 1703 | IC SI-3025LSA-TL |
| IC401 | 409 554 1301 | IC L3E07070K0A |
| IC4801 | 409 395 5902 | IC TC7SH00FU-(TE85L) |
| IC491 | 409 555 6404 | IC SI-3018KS-TL |
| IC5001 | 409 438 5500 | IC TC4052BFT |
| IC5002 | 409 341 4102 | IC BA7655AF |
| IC5003 | 409 516 4005 | IC LM4865M |
| IC501 | 409 554 1202 | IC L3E06100D0A |
| IC5301 | 409 484 2003 | IC BA7078AF-E2 |
| IC5302 | 409 545 7503 | IC TA1370FG |
| IC5303 | 410 488 3408 | IC TC74LVX125FT |
| IC531 | 409 554 1202 | IC L3E06100D0A |
| IC561 | 409 554 1202 | IC L3E06100D0A |
| IC5631 | 409 555 6503 | IC SI-3033ZD-TL |
| IC5641 | 409 563 9602 | IC SI-3012KS-TL |
| IC5642 | 409 497 6302 | IC BA09FP-E2 |
| IC801 | 410 481 8707 | IC MBM29DL32TF70TNC260 |
| IC801A | 410 480 1006 | IC MBM29DL32TF70TN |
| IC8201 | 409 523 4807 | IC AD9883AKST-110 |
| IC8801 | 409 481 8602 | IC LM76CHMX-5 |
| IC8802 | 409 481 8602 | IC LM76CHMX-5 |
| IC9401 | 410 403 7900 | IC LC24085BT-UG4 |
| IC9801 | 409 565 9600 | IC SP232AEN |
| IC9861 | 409 502 5108 | IC PDIUSBD12PW-118 |
| CAPACITOR | | |
| C101 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C104 | 403 281 5205 | CERAMIC 0.22U Z 16V |
| C106 | 403 281 5205 | CERAMIC 0.22U Z 16V |
| C107 | 403 281 5205 | CERAMIC 0.22U Z 16V |
| C108 | 403 281 5205 | CERAMIC 0.22U Z 16V |
| C109 | 403 215 0900 | CERAMIC 390P J 50V |
| C111 | 403 379 6701 | CERAMIC 10U K 16V |
| C112 | 403 205 2808 | CERAMIC 0.047U K 25V |
| C113 | 403 281 5205 | CERAMIC 0.22U Z 16V |
| C114 | 403 155 2101 | CERAMIC 1500P K 50V |
| C116 | 403 215 0900 | CERAMIC 390P J 50V |
| C117 | 403 281 5205 | CERAMIC 0.22U Z 16V |
| C118 | 403 379 6701 | CERAMIC 10U K 16V |
| C119 | 403 205 2808 | CERAMIC 0.047U K 25V |
| C121 | 403 215 0900 | CERAMIC 390P J 50V |
| C122 | 403 155 2101 | CERAMIC 1500P K 50V |
| C123 | 403 281 5205 | CERAMIC 0.22U Z 16V |
| C124 | 403 157 1508 | CERAMIC 3P C 50V |
| C126 | 403 157 1508 | CERAMIC 3P C 50V |
| C127 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C128 | 403 310 8306 | CERAMIC 10U Z 10V |
| C129 | 403 307 7008 | CERAMIC 0.068U K 16V |
| C131 | 403 307 7008 | CERAMIC 0.068U K 16V |
| C132 | 403 307 7008 | CERAMIC 0.068U K 16V |
| C133 | 403 307 7008 | CERAMIC 0.068U K 16V |
| C134 | 403 155 2101 | CERAMIC 1500P K 50V |
| C136 | 403 205 2808 | CERAMIC 0.047U K 25V |
| C137 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C138 | 403 378 3107 | CERAMIC 47U Z 6.3V |
| C139 | 403 281 5205 | CERAMIC 0.22U Z 16V |
| C141 | 403 155 2101 | CERAMIC 1500P K 50V |
| C142 | 403 215 0900 | CERAMIC 390P J 50V |
| C147 | 403 281 5205 | CERAMIC 0.22U Z 16V |

## Electrical Parts List

| Key No. | Part No. | Description | Key No. | Part No. | Description |
|---|---|---|---|---|---|
| C148 | 403 281 5205 | CERAMIC 0.22U Z 16V | C3523 | 403 157 3601 | CERAMIC 100P J 50V |
| C149 | 403 281 5205 | CERAMIC 0.22U Z 16V | C353 | 403 149 9208 | CERAMIC 0.01U Z 50V |
| C151 | 403 164 0204 | CERAMIC 0.1U Z 25V | C3531 | 403 379 6701 | CERAMIC 10U K 16V |
| C152 | 403 164 0204 | CERAMIC 0.1U Z 25V | C3532 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C153 | 403 164 0204 | CERAMIC 0.1U Z 25V | C3533 | 403 157 3601 | CERAMIC 100P J 50V |
| C154 | 403 379 6701 | CERAMIC 10U K 16V | C3534 | 403 149 9208 | CERAMIC 0.01U Z 50V |
| C156 | 403 164 0204 | CERAMIC 0.1U Z 25V | C354 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C157 | 403 322 7809 | ELECT 220U M 6.3V | C3551 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| | 403 349 4706 | ELECT 220U M 6.3V | C3552 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C158 | 403 164 0204 | CERAMIC 0.1U Z 25V | C3555TM | 403 341 3905 | POS-SOLID 100U M 6.3V |
| C1821 | 403 164 0204 | CERAMIC 0.1U Z 25V | C3561 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C1841 | 403 164 0204 | CERAMIC 0.1U Z 25V | C3562 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C1863 | 403 164 0204 | CERAMIC 0.1U Z 25V | C3563 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C1871 | 403 283 6309 | CERAMIC 1U Z 10V | C3571 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C1872 | 403 283 6309 | CERAMIC 1U Z 10V | C3572 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C1873 | 403 283 6309 | CERAMIC 1U Z 10V | C3581 | 403 304 1801 | ELECT 100U M 6.3V |
| C1881 | 403 164 0204 | CERAMIC 0.1U Z 25V | | 403 373 7704 | ELECT 100U M 6.3V |
| C1887 | 403 348 5803 | CERAMIC 0.47U K 10V | C3591 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C1891 | 403 164 0204 | CERAMIC 0.1U Z 25V | C3592 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C1892 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | C3593 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C1893 | 403 164 0204 | CERAMIC 0.1U Z 25V | C3594 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C2501 | 403 304 1801 | ELECT 100U M 6.3V | C3596 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| | 403 373 7704 | ELECT 100U M 6.3V | C360TM | 403 069 0507 | CERAMIC 1000P K 50V |
| C2511 | 403 229 3508 | ELECT 100U M 16V | C370TM | 403 206 9004 | ELECT 1000U M 6.3V |
| | 403 335 0408 | ELECT 100U M 16V | C371 | 403 283 6309 | CERAMIC 1U Z 10V |
| C2512 | 403 164 0204 | CERAMIC 0.1U Z 25V | C372 | 403 283 6309 | CERAMIC 1U Z 10V |
| C2513 | 403 164 0204 | CERAMIC 0.1U Z 25V | C373 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C2514 | 403 379 6701 | CERAMIC 10U K 16V | C374 | 403 325 6304 | CERAMIC 0.22U K 10V |
| C2516 | 403 164 0204 | CERAMIC 0.1U Z 25V | C376 | 403 113 4109 | CERAMIC 2200P K 50V |
| C2517 | 403 164 0204 | CERAMIC 0.1U Z 25V | C377 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C2519 | 403 175 4000 | ELECT 33U M 16V | C378 | 403 322 7809 | ELECT 220U M 6.3V |
| C2521 | 403 164 0204 | CERAMIC 0.1U Z 25V | | 403 349 4706 | ELECT 220U M 6.3V |
| C2531 | 403 379 6701 | CERAMIC 10U K 16V | C379 | 403 169 2807 | CERAMIC 330P J 50V |
| C2532 | 403 164 0204 | CERAMIC 0.1U Z 25V | C381 | 403 155 2309 | CERAMIC 4700P K 50V |
| C2533 | 403 164 0204 | CERAMIC 0.1U Z 25V | C382 | 403 379 6701 | CERAMIC 10U K 16V |
| C2534 | 403 164 0204 | CERAMIC 0.1U Z 25V | C384 | 403 215 2102 | CERAMIC 8200P K 50V |
| C2537 | 403 175 4000 | ELECT 33U M 16V | C386 | 403 347 5507 | POS-SOLID 470U M 4V |
| C2538 | 403 164 0204 | CERAMIC 0.1U Z 25V | C387 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C2571 | 403 164 0204 | CERAMIC 0.1U Z 25V | C388 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C2572 | 403 379 6701 | CERAMIC 10U K 16V | C390 | 403 304 1801 | ELECT 100U M 6.3V |
| C2573 | 403 164 0204 | CERAMIC 0.1U Z 25V | | 403 373 7704 | ELECT 100U M 6.3V |
| C2574 | 403 164 0204 | CERAMIC 0.1U Z 25V | C391 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C2577 | 403 175 4000 | ELECT 33U M 16V | C393 | 403 215 2102 | CERAMIC 8200P K 50V |
| C2578 | 403 164 0204 | CERAMIC 0.1U Z 25V | C394 | 403 347 5507 | POS-SOLID 470U M 4V |
| C301 | 403 280 0508 | ELECT 470U M 4V | C396 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C308 | 403 280 0508 | ELECT 470U M 4V | C4002 | 403 149 9208 | CERAMIC 0.01U Z 50V |
| C314 | 403 164 0204 | CERAMIC 0.1U Z 25V | C401 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C316 | 403 164 0204 | CERAMIC 0.1U Z 25V | C402 | 403 215 2201 | CERAMIC 0.01U K 50V |
| C319 | 403 164 0204 | CERAMIC 0.1U Z 25V | C411 | 403 149 9208 | CERAMIC 0.01U Z 50V |
| C321 | 403 164 0204 | CERAMIC 0.1U Z 25V | C412 | 403 283 6309 | CERAMIC 1U Z 10V |
| C324 | 403 164 0204 | CERAMIC 0.1U Z 25V | C413 | 403 149 9208 | CERAMIC 0.01U Z 50V |
| C326 | 403 164 0204 | CERAMIC 0.1U Z 25V | C414 | 403 149 9208 | CERAMIC 0.01U Z 50V |
| C329 | 403 164 0204 | CERAMIC 0.1U Z 25V | C416 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C331 | 403 164 0204 | CERAMIC 0.1U Z 25V | C417 | 403 379 6701 | CERAMIC 10U K 16V |
| C332 | 403 164 0204 | CERAMIC 0.1U Z 25V | C419 | 403 149 9208 | CERAMIC 0.01U Z 50V |
| C333 | 403 164 0204 | CERAMIC 0.1U Z 25V | C420 | 403 379 6701 | CERAMIC 10U K 16V |
| C339 | 403 139 7306 | CERAMIC 18P J 50V | C421 | 403 283 6309 | CERAMIC 1U Z 10V |
| C341 | 403 139 7306 | CERAMIC 18P J 50V | C422 | 403 149 9208 | CERAMIC 0.01U Z 50V |
| C343 | 403 283 6309 | CERAMIC 1U Z 10V | C423 | 403 149 9208 | CERAMIC 0.01U Z 50V |
| C344 | 403 283 6309 | CERAMIC 1U Z 10V | C424 | 403 149 9208 | CERAMIC 0.01U Z 50V |
| C3501 | 403 149 9208 | CERAMIC 0.01U Z 50V | C426 | 403 149 9208 | CERAMIC 0.01U Z 50V |
| C3502 | 403 149 9208 | CERAMIC 0.01U Z 50V | C427 | 403 149 9208 | CERAMIC 0.01U Z 50V |
| C3503 | 403 157 6701 | CERAMIC 560P K 50V | C428 | 403 149 9208 | CERAMIC 0.01U Z 50V |
| C3504 | 403 157 6701 | CERAMIC 560P K 50V | C429 | 403 149 9208 | CERAMIC 0.01U Z 50V |
| C352 | 403 149 9208 | CERAMIC 0.01U Z 50V | C431 | 403 149 9208 | CERAMIC 0.01U Z 50V |
| C3521 | 403 379 6701 | CERAMIC 10U K 16V | C432 | 403 149 9208 | CERAMIC 0.01U Z 50V |
| C3522 | 403 164 0204 | CERAMIC 0.1U Z 25V | C433 | 403 149 9208 | CERAMIC 0.01U Z 50V |

## Electrical Parts List

| Key No. | Part No. | Description | | Key No. | Part No. | Description | |
|---|---|---|---|---|---|---|---|
| C434 | 403 149 9208 | CERAMIC | 0.01U Z 50V | C532 | 403 162 3900 | ELECT | 47U M 4V |
| C436 | 403 149 9208 | CERAMIC | 0.01U Z 50V | C5321 | 403 215 2201 | CERAMIC | 0.01U K 50V |
| C437 | 403 149 9208 | CERAMIC | 0.01U Z 50V | C5326 | 403 379 6701 | CERAMIC | 10U K 16V |
| C438 | 403 149 9208 | CERAMIC | 0.01U Z 50V | C5327 | 403 323 8805 | CERAMIC | 2.2U Z 16V |
| C439 | 403 149 9208 | CERAMIC | 0.01U Z 50V | C5328 | 403 298 9609 | CERAMIC | 0.1U K 16V |
| C4801 | 403 164 0204 | CERAMIC | 0.1U Z 25V | C5329 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C4802 | 403 205 2808 | CERAMIC | 0.047U K 25V | C5341 | 403 379 6701 | CERAMIC | 10U K 16V |
| C4812 | 403 164 0204 | CERAMIC | 0.1U Z 25V | C5342 | 403 283 6309 | CERAMIC | 1U Z 10V |
| C4814 | 403 164 0204 | CERAMIC | 0.1U Z 25V | C5343 | 403 207 0307 | CERAMIC | 1U Z 16V |
| C491 | 403 149 9208 | CERAMIC | 0.01U Z 50V | C5344 | 403 283 6309 | CERAMIC | 1U Z 10V |
| C492 | 403 164 0204 | CERAMIC | 0.1U Z 25V | C5345 | 403 155 4204 | CERAMIC | 15P J 50V |
| C493 | 403 304 1801 | ELECT | 100U M 6.3V | C536 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| | 403 373 7704 | ELECT | 100U M 6.3V | C537 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C5006 | 403 323 8805 | CERAMIC | 2.2U Z 16V | C538 | 403 215 1006 | CERAMIC | 470P J 50V |
| C5007 | 403 323 8805 | CERAMIC | 2.2U Z 16V | C539 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C5008 | 403 323 1301 | CERAMIC | 0.47U Z 10V | C540 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C5009 | 403 323 8805 | CERAMIC | 2.2U Z 16V | C541 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C501 | 403 164 0204 | CERAMIC | 0.1U Z 25V | C543 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C5010 | 403 164 0204 | CERAMIC | 0.1U Z 25V | C544 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C5011 | 403 283 6309 | CERAMIC | 1U Z 10V | C546 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C5012 | 403 164 0204 | CERAMIC | 0.1U Z 25V | C547 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C5013 | 403 352 8203 | CERAMIC | 0.47U Z 16V | C548 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C5014 | 403 323 8805 | CERAMIC | 2.2U Z 16V | C549 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C5015 | 403 304 1801 | ELECT | 100U M 6.3V | C551 | 403 149 9208 | CERAMIC | 0.01U Z 50V |
| | 403 373 7704 | ELECT | 100U M 6.3V | C5601 | 403 374 8403 | OS-SOLID | 39U M 16V |
| C5016 | 403 323 8805 | CERAMIC | 2.2U Z 16V | C5602 | 403 374 8403 | OS-SOLID | 39U M 16V |
| C5017 | 403 322 7809 | ELECT | 220U M 6.3V | C5603 | 403 374 8403 | OS-SOLID | 39U M 16V |
| | 403 349 4706 | ELECT | 220U M 6.3V | C5604 | 403 372 8702 | OS-SOLID | 120U M 6.3 |
| C5018 | 403 164 0204 | CERAMIC | 0.1U Z 25V | C5606 | 403 280 1604 | ELECT | 220U M 16V |
| C502 | 403 162 3900 | ELECT | 47U M 4V | C5607 | 403 280 1604 | ELECT | 220U M 16V |
| C5020 | 403 164 0204 | CERAMIC | 0.1U Z 25V | C5608 | 403 322 7809 | ELECT | 220U M 6.3V |
| C5021 | 403 279 4302 | CERAMIC | 0.33U K 16V | | 403 349 4706 | ELECT | 220U M 6.3V |
| C5022 | 403 164 0204 | CERAMIC | 0.1U Z 25V | C561 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C5023 | 403 149 9208 | CERAMIC | 0.01U Z 50V | C562 | 403 162 3900 | ELECT | 47U M 4V |
| C5024 | 403 164 0204 | CERAMIC | 0.1U Z 25V | C5632 | 403 304 2105 | ELECT | 47U M 6.3V |
| C5026 | 403 208 1402 | TA-SOLID | 1U M 25V | C5633 | 403 347 5507 | POS-SOLID | 470U M 4V |
| C5035 | 403 164 0204 | CERAMIC | 0.1U Z 25V | C5634 | 403 304 1801 | ELECT | 100U M 6.3V |
| C5046 | 403 379 6701 | CERAMIC | 10U K 16V | | 403 373 7704 | ELECT | 100U M 6.3V |
| C506 | 403 164 0204 | CERAMIC | 0.1U Z 25V | C5635 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C507 | 403 164 0204 | CERAMIC | 0.1U Z 25V | C5641 | 403 229 3508 | ELECT | 100U M 16V |
| C508 | 403 215 1006 | CERAMIC | 470P J 50V | | 403 335 0408 | ELECT | 100U M 16V |
| C509 | 403 164 0204 | CERAMIC | 0.1U Z 25V | C5642 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C510 | 403 164 0204 | CERAMIC | 0.1U Z 25V | C5643 | 403 229 3508 | ELECT | 100U M 16V |
| C511 | 403 164 0204 | CERAMIC | 0.1U Z 25V | | 403 335 0408 | ELECT | 100U M 16V |
| C513 | 403 164 0204 | CERAMIC | 0.1U Z 25V | C566 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C514 | 403 164 0204 | CERAMIC | 0.1U Z 25V | C567 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C516 | 403 164 0204 | CERAMIC | 0.1U Z 25V | C568 | 403 215 1006 | CERAMIC | 470P J 50V |
| C517 | 403 164 0204 | CERAMIC | 0.1U Z 25V | C569 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C518 | 403 164 0204 | CERAMIC | 0.1U Z 25V | C570 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C519 | 403 164 0204 | CERAMIC | 0.1U Z 25V | C571 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C521 | 403 149 9208 | CERAMIC | 0.01U Z 50V | C573 | 403 149 9208 | CERAMIC | 0.01U Z 50V |
| C5300 | 403 304 1801 | ELECT | 100U M 6.3V | C574 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| | 403 373 7704 | ELECT | 100U M 6.3V | C576 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C5301 | 403 355 9900 | CERAMIC | 2.2U K 10V | C577 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C5302 | 403 314 5905 | CERAMIC | 0.47U K 16V | C578 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C5303 | 403 314 5905 | CERAMIC | 0.47U K 16V | C579 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C5304 | 403 316 5408 | CERAMIC | 1U K 10V | C581 | 403 149 9208 | CERAMIC | 0.01U Z 50V |
| C5306 | 403 355 9900 | CERAMIC | 2.2U K 10V | C6217 | 403 364 5801 | CERAMIC | 1U K 10V |
| C5307 | 403 364 5801 | CERAMIC | 1U K 10V | C6218 | 403 364 5801 | CERAMIC | 1U K 10V |
| C5308 | 403 283 6309 | CERAMIC | 1U Z 10V | C6219 | 403 364 5801 | CERAMIC | 1U K 10V |
| C5309 | 403 323 8805 | CERAMIC | 2.2U Z 16V | C6221 | 403 157 2901 | CERAMIC | 47P J 50V |
| C531 | 403 164 0204 | CERAMIC | 0.1U Z 25V | C6222 | 403 157 2901 | CERAMIC | 47P J 50V |
| C5311 | 403 157 3601 | CERAMIC | 100P J 50V | C6223 | 403 157 2901 | CERAMIC | 47P J 50V |
| C5317 | 403 229 3508 | ELECT | 100U M 16V | C802 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| | 403 335 0408 | ELECT | 100U M 16V | C8201 | 403 379 6701 | CERAMIC | 10U K 16V |
| C5318 | 403 298 9609 | CERAMIC | 0.1U K 16V | C8202 | 403 164 0204 | CERAMIC | 0.1U Z 25V |
| C5319 | 403 162 6604 | ELECT | 2.2U M 50V | C8203 | 403 164 0204 | CERAMIC | 0.1U Z 25V |

| Key No. | Part No. | Description |
|---|---|---|
| C8204 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C8206 | 403 283 2905 | CERAMIC 0.082U K 16V |
| C8207 | 403 215 2102 | CERAMIC 8200P K 50V |
| C8209 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C8211 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C8212 | 403 379 6701 | CERAMIC 10U K 16V |
| C8213 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C8214 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C8216 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C8217 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C8218 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C8219 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C8221 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C8222 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C8223 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C8224 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C8801 | 403 155 1609 | CERAMIC 33P J 50V |
| C8802 | 403 155 1609 | CERAMIC 33P J 50V |
| C8803 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C8804 | 403 155 1609 | CERAMIC 33P J 50V |
| C8806 | 403 155 1609 | CERAMIC 33P J 50V |
| C8807 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C9401 | 403 379 6701 | CERAMIC 10U K 16V |
| C9402 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C9403 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C9404 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C9406 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C9407 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C9408 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C9409 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C9411 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C9412 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C9413 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C9414 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C9801 | 403 310 8306 | CERAMIC 10U Z 10V |
| C9802 | 403 310 8306 | CERAMIC 10U Z 10V |
| C9803 | 403 310 8306 | CERAMIC 10U Z 10V |
| C9804 | 403 310 8306 | CERAMIC 10U Z 10V |
| C9806 | 403 283 6309 | CERAMIC 1U Z 10V |
| RESISTOR | | |
| RB101 | 645 036 0985 | R-NETWORK 47X4 1/32W |
| | 645 037 0830 | R-NETWORK 47X4 1/32W |
| RB102 | 645 036 0985 | R-NETWORK 47X4 1/32W |
| | 645 037 0830 | R-NETWORK 47X4 1/32W |
| RB103 | 645 036 0985 | R-NETWORK 47X4 1/32W |
| | 645 037 0830 | R-NETWORK 47X4 1/32W |
| RB104 | 645 036 0985 | R-NETWORK 47X4 1/32W |
| | 645 037 0830 | R-NETWORK 47X4 1/32W |
| RB1401 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB1402 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB1403 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB1404 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB1406 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB1407 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB2501 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB2502 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB2503 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB2531 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB2532 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB2533 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB2561 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB2562 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB2563 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB301 | 645 036 3528 | R-NETWORK 0X4 1/32W |
| RB302 | 645 036 3528 | R-NETWORK 0X4 1/32W |
| RB303 | 645 036 3528 | R-NETWORK 0X4 1/32W |
| RB304 | 645 036 3528 | R-NETWORK 0X4 1/32W |
| RB306 | 645 036 3528 | R-NETWORK 0X4 1/32W |
| RB307 | 645 036 3528 | R-NETWORK 0X4 1/32W |
| RB401 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB402 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB403 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB404 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB406 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB407 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB408 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB409 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB8201 | 645 037 3107 | R-NETWORK 10X4 0.063W |
| | 645 028 5981 | R-NETWORK 10X4 1/16W |
| RB8202 | 645 037 3107 | R-NETWORK 10X4 0.063W |
| | 645 028 5981 | R-NETWORK 10X4 1/16W |
| RB8203 | 645 037 3107 | R-NETWORK 10X4 0.063W |
| | 645 028 5981 | R-NETWORK 10X4 1/16W |
| RB8204 | 645 037 3107 | R-NETWORK 10X4 0.063W |
| | 645 028 5981 | R-NETWORK 10X4 1/16W |
| RB8206 | 645 037 3107 | R-NETWORK 10X4 0.063W |
| | 645 028 5981 | R-NETWORK 10X4 1/16W |
| RB8207 | 645 037 3107 | R-NETWORK 10X4 0.063W |
| | 645 028 5981 | R-NETWORK 10X4 1/16W |
| RB9401 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB9402 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB9403 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB9404 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB9406 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| RB9407 | 645 037 0656 | R-NETWORK 0X4 0.063W |
| | 645 024 7477 | R-NETWORK 0X4 1/16W |
| R100 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R101 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R102 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R103 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R104 | 401 105 5202 | MT-GLAZE 470 JA 1/16W |
| R105 | 401 105 5202 | MT-GLAZE 470 JA 1/16W |
| R109 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R111 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R112 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R113 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |

## Electrical Parts List

| Key No. | Part No. | Description |
|---|---|---|
| R114 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R116 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R121 | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W |
| R123 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R126 | 645 026 1022 | INDUCTOR,4.7U M |
| R131 | 401 105 5103 | MT-GLAZE 47 JA 1/16W |
| R134 | 401 105 5103 | MT-GLAZE 47 JA 1/16W |
| R136 | 401 105 5103 | MT-GLAZE 47 JA 1/16W |
| R138 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1381 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R1382 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R1383 | 401 105 4106 | MT-GLAZE 3.3K JA 1/16W |
| R1384 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R1386 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R1403 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R141 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R1417 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R142 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R1421 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1422 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R143 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R1438 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R1443 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1444 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R146 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R1463 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R1467 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1468 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1469 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1471 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R1472 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R1814 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R1816 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R1817 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R1818 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R1819 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R1822 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1823 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1824 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1826 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1827 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1829 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1841 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1842 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R1843 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R1844 | 401 105 4106 | MT-GLAZE 3.3K JA 1/16W |
| R1846 | 401 105 4106 | MT-GLAZE 3.3K JA 1/16W |
| R1847 | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W |
| R1848 | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W |
| R1849 | 401 105 4106 | MT-GLAZE 3.3K JA 1/16W |
| R1851 | 401 105 4106 | MT-GLAZE 3.3K JA 1/16W |
| R1852 | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W |
| R1853 | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W |
| R1861 | 401 105 5905 | MT-GLAZE 560 JA 1/16W |
| R1863 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R1864 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1866 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1867 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1871 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R1872 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R1873 | 401 105 1105 | MT-GLAZE 12K JA 1/16W |
| R1874 | 401 105 2508 | MT-GLAZE 20K JA 1/16W |
| R1876 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1877 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R1880 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1881 | 401 105 2706 | MT-GLAZE 220 JA 1/16W |
| R1882 | 401 105 2706 | MT-GLAZE 220 JA 1/16W |
| R1883 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1884 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1885 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R1887 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R1888 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1890 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1892 | 401 105 8005 | MT-GLAZE 1M JA 1/16W |
| R1893 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R2501 | 401 105 1501 | MT-GLAZE 1.5K JA 1/16W |
| R2502 | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W |
| R2503 | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W |
| R2504 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R2511 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2512 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2513 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2514 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2516 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2518 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2519 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2522 | 401 148 6006 | MT-GLAZE 2.2 JA 1/16W |
| R2523 | 401 148 6006 | MT-GLAZE 2.2 JA 1/16W |
| R2527 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2531 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2532 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2533 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2534 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2536 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2538 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2539 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2542 | 401 148 6006 | MT-GLAZE 2.2 JA 1/16W |
| R2543 | 401 148 6006 | MT-GLAZE 2.2 JA 1/16W |
| R2548 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2561 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2562 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2563 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2564 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2566 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2568 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2569 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2572 | 401 148 6006 | MT-GLAZE 2.2 JA 1/16W |
| R2573 | 401 148 6006 | MT-GLAZE 2.2 JA 1/16W |
| R2576 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R303 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R304 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R306 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R308 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R312 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R314 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R316 | 401 105 4007 | MT-GLAZE 330 JA 1/16W |
| R317 | 401 105 6506 | MT-GLAZE 680 JA 1/16W |
| R318 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R322 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R324 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R327 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R329 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R331 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R332 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R333 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R334 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R3503 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R3504 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R3507 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3508 | 401 105 2805 | MT-GLAZE 2.2K JA 1/16W |
| R3509 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R351 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3511 | 401 105 2805 | MT-GLAZE 2.2K JA 1/16W |
| R3512 | 401 105 6001 | MT-GLAZE 5.6K JA 1/16W |

## Electrical Parts List

| Key No. | Part No. | Description | Key No. | Part No. | Description |
|---|---|---|---|---|---|
| R3513 | 401 105 6001 | MT-GLAZE 5.6K JA 1/16W | R404 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3522 | 401 105 0504 | MT-GLAZE 1K JA 1/16W | R406 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3523 | 401 105 0504 | MT-GLAZE 1K JA 1/16W | R407 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3526 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R408 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3528 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R409 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R353 | 401 105 1600 | MT-GLAZE 15K JA 1/16W | R411 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3531 | 401 105 2805 | MT-GLAZE 2.2K JA 1/16W | R423 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R3532 | 401 105 0504 | MT-GLAZE 1K JA 1/16W | R424 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R354 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R426 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R3551 | 401 105 0405 | MT-GLAZE 100 JA 1/16W | R427 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R3552 | 401 105 0405 | MT-GLAZE 100 JA 1/16W | R429 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3561 | 401 105 0405 | MT-GLAZE 100 JA 1/16W | R431 | 401 105 2508 | MT-GLAZE 20K JA 1/16W |
| R3562 | 401 105 0405 | MT-GLAZE 100 JA 1/16W | R432 | 401 113 4402 | MT-GLAZE 75 JA 1/16W |
| R3565 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R433 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3571 | 401 105 0405 | MT-GLAZE 100 JA 1/16W | R434 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3572 | 401 105 0405 | MT-GLAZE 100 JA 1/16W | R436 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R3575 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R438 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R358 | 401 113 5904 | MT-GLAZE 1.3K JA 1/16W | R439 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R3581 | 401 105 0504 | MT-GLAZE 1K JA 1/16W | R4801 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R3582 | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W | R4802 | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W |
| R3583 | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W | R4803 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R3584 | 401 105 1501 | MT-GLAZE 1.5K JA 1/16W | R4804 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R359 | 401 105 5905 | MT-GLAZE 560 JA 1/16W | R4806 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3591 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R4807 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R3592 | 401 113 6604 | MT-GLAZE 7.5K JA 1/16W | R4808 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R3593 | 401 113 6604 | MT-GLAZE 7.5K JA 1/16W | R4811 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3594 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R4814 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3596 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R4816 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3597 | 401 105 0603 | MT-GLAZE 10K JA 1/16W | R5001 | 401 105 5509 | MT-GLAZE 470K JA 1/16W |
| R3598 | 401 105 4601 | MT-GLAZE 3.9K JA 1/16W | R5002 | 401 105 5509 | MT-GLAZE 470K JA 1/16W |
| R3599 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R5003 | 401 105 5509 | MT-GLAZE 470K JA 1/16W |
| R361 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R5004 | 401 105 5509 | MT-GLAZE 470K JA 1/16W |
| R362 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R5011 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R363 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R5013 | 401 105 0702 | MT-GLAZE 100K JA 1/16W |
| R364 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R5014 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R366 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R5015 | 401 105 0702 | MT-GLAZE 100K JA 1/16W |
| R367 | 401 105 0504 | MT-GLAZE 1K JA 1/16W | R5016 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R368 | 401 105 0504 | MT-GLAZE 1K JA 1/16W | R5017 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R371 | 401 105 4700 | MT-GLAZE 39K JA 1/16W | R5018 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R372 | 401 113 8301 | MT-GLAZE 62K JA 1/16W | R5019 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R373 | 401 105 4700 | MT-GLAZE 39K JA 1/16W | R502 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R374 | 401 113 8301 | MT-GLAZE 62K JA 1/16W | R5021 | 401 105 2805 | MT-GLAZE 2.2K JA 1/16W |
| R376 | 401 113 6703 | MT-GLAZE 9.1K JA 1/16W | R5022 | 401 105 1501 | MT-GLAZE 1.5K JA 1/16W |
| R377 | 401 113 6703 | MT-GLAZE 9.1K JA 1/16W | R5023 | 401 105 5400 | MT-GLAZE 47K JA 1/16W |
| R378 | 401 113 6703 | MT-GLAZE 9.1K JA 1/16W | R5026 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R379 | 401 113 6703 | MT-GLAZE 9.1K JA 1/16W | R5027 | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W |
| R381 | 401 105 2508 | MT-GLAZE 20K JA 1/16W | R5028 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R382 | 401 113 4204 | MT-GLAZE 51 JA 1/16W | R5029 | 401 105 2805 | MT-GLAZE 2.2K JA 1/16W |
| R383 | 401 105 4007 | MT-GLAZE 330 JA 1/16W | R5031 | 401 105 1501 | MT-GLAZE 1.5K JA 1/16W |
| R384 | 401 105 4106 | MT-GLAZE 3.3K JA 1/16W | R5032 | 401 105 2003 | MT-GLAZE 1.8K JA 1/16W |
| R386 | 401 113 6208 | MT-GLAZE 3.6K JA 1/16W | R5034 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R387 | 401 105 2102 | MT-GLAZE 18K JA 1/16W | R5035 | 401 105 1501 | MT-GLAZE 1.5K JA 1/16W |
| R388 | 401 105 4007 | MT-GLAZE 330 JA 1/16W | R5036 | 401 037 5103 | MT-GLAZE 10 JA 1/10W |
| R389 | 401 113 4204 | MT-GLAZE 51 JA 1/16W | R5038 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R391 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R5039 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R392 | 401 105 4106 | MT-GLAZE 3.3K JA 1/16W | R504 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R393 | 401 105 3802 | MT-GLAZE 30K JA 1/16W | R5041 | 401 105 1501 | MT-GLAZE 1.5K JA 1/16W |
| R394 | 401 105 2102 | MT-GLAZE 18K JA 1/16W | R5042 | 401 113 6406 | MT-GLAZE 5.1K JA 1/16W |
| R396 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R5043 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R400 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R5044 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R4002 | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W | R5046 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R4003 | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W | R5047 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R4004 | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W | R506 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R4006 | 401 105 0405 | MT-GLAZE 100 JA 1/16W | R509 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R401 | 401 105 0405 | MT-GLAZE 100 JA 1/16W | R511 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R402 | 401 105 0405 | MT-GLAZE 100 JA 1/16W | R517 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R403 | 401 105 0405 | MT-GLAZE 100 JA 1/16W | R522 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |

Electrical Parts List

| Key No. | Part No. | Description |
|---|---|---|
| R523 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R524 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R527 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R5302 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R5304 | 401 105 8005 | MT-GLAZE 1M JA 1/16W |
| R5307 | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W |
| R5308 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R5309 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R5310 | 645 026 1022 | INDUCTOR,4.7U M |
| R5311 | 401 105 4601 | MT-GLAZE 3.9K JA 1/16W |
| R5316 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R5317 | 401 105 6001 | MT-GLAZE 5.6K JA 1/16W |
| R5318 | 401 113 5201 | MT-GLAZE 360 JA 1/16W |
| R532 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R5327 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R5328 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R5330 | 401 105 5202 | MT-GLAZE 470 JA 1/16W |
| R5331 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R5332 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R5333 | 401 105 4106 | MT-GLAZE 3.3K JA 1/16W |
| R5334 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R5335 | 401 105 6605 | MT-GLAZE 6.8K JA 1/16W |
| R5336 | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W |
| R5337 | 401 105 5202 | MT-GLAZE 470 JA 1/16W |
| R5338 | 401 105 6605 | MT-GLAZE 6.8K JA 1/16W |
| R5339 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R534 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R5341 | 645 026 1022 | INDUCTOR,4.7U M |
| R5342 | 401 105 2805 | MT-GLAZE 2.2K JA 1/16W |
| R5343 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R5344 | 401 105 6100 | MT-GLAZE 560K JA 1/16W |
| R5346 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R5347 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R5348 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R5351 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R5352 | 401 105 2805 | MT-GLAZE 2.2K JA 1/16W |
| R5353 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R536 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R5361 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R5362 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R5363 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R5364 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R5366 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R5367 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R5368 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R5369 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R539 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R541 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R547 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R552 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R553 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R554 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R557 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R5602 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R5611 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R5612 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R5613 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R5614 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R5616 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R5617 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R5618 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R5619 | 401 105 6001 | MT-GLAZE 5.6K JA 1/16W |
| R562 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R5620 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R5631 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R5632 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R564 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R5641 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R5642 | 401 113 8905 | MT-GLAZE 200K JA 1/16 |
| R5643 | 401 113 7106 | MT-GLAZE 24K JA 1/16W |
| R566 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R569 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R571 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R577 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R582 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R583 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R584 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R587 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R6201 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R6202 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R6203 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R6204 | 401 105 3208 | MT-GLAZE 270 JA 1/16W |
| R6206 | 401 105 3208 | MT-GLAZE 270 JA 1/16W |
| R6207 | 401 105 3208 | MT-GLAZE 270 JA 1/16W |
| R6216 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R6217 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R6218 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R6223 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R6224 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R6226 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R6253 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R6254 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R6256 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R6823 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R6851 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R6852 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R6854 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R6856 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R6857 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R6858 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R6859 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R6861 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R6862 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R803 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R804 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R807 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R808 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R811 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R8201 | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W |
| R8204 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R8206 | 401 105 3307 | MT-GLAZE 2.7K JA 1/16W |
| R8207 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R8208 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R8209 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R8212 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R8213 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R8214 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R843 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R844 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R853 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R854 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R863 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R864 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R873 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R874 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R8801 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R8802 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R8803 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R8804 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R8808 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R8809 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R8812 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R9401 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R9402 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |

| Key No. | Part No. | Description |
|---|---|---|
| R9403 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R9404 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R9406 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R9407 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R9411 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R9412 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R9413 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R9414 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R9416 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R9417 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R9418 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R9419 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R9421 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R9422 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R9425 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R9802 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R9803 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R9804 | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W |
| R9806 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R9807 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R9808 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R9809 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R9812 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R9813 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R9814 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R9861 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R9863 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R9864 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R9871 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R9872 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R9874 | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W |
| R9877 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R9888 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| COIL | | |
| L101 | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W |
| L102 | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W |
| L103 | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W |
| L2501 | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W |
| L2511 | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W |
| L3551 | 645 026 1008 | INDUCTOR,3.3U M |
| L3561 | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W |
| L3571 | 645 026 1008 | INDUCTOR,3.3U M |
| L3581 | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W |
| L370 | 645 033 7949 | INDUCTOR,33U M |
| L371 | 645 033 7949 | INDUCTOR,33U M |
| L372 | 645 062 2854 | INDUCTOR,33U M |
| L5003 | 645 033 7949 | INDUCTOR,33U M |
| L501 | 645 041 2189 | INDUCTOR,3.3U J |
| L502 | 645 041 2189 | INDUCTOR,3.3U J |
| L531 | 645 041 2189 | INDUCTOR,3.3U J |
| L532 | 645 041 2189 | INDUCTOR,3.3U J |
| L561 | 645 041 2189 | INDUCTOR,3.3U J |
| L562 | 645 041 2189 | INDUCTOR,3.3U J |
| L8201 | 645 020 1776 | INDUCTOR,3.3U M |
| DIODE | | |
| D101 | 407 149 0807 | DIODE 1SS355-TE-17 |
| D2511 | 407 149 0807 | DIODE 1SS355-TE-17 |
| D301 | 407 149 0807 | DIODE 1SS355-TE-17 |
| D371 | 407 210 3300 | DIODE RB161L-40-TE25 |
| D372 | 407 210 3300 | DIODE RB161L-40-TE25 |
| D4811 | 407 223 1102 | ZENER DIODE 02DZ6.2Y(TPH3 |
| D4812 | 407 223 1102 | ZENER DIODE 02DZ6.2Y(TPH3 |
| D4813 | 407 223 1102 | ZENER DIODE 02DZ6.2Y(TPH3 |
| D4814 | 407 223 1102 | ZENER DIODE 02DZ6.2Y(TPH3 |
| D4815 | 407 223 1102 | ZENER DIODE 02DZ6.2Y(TPH3 |
| D491 | 407 149 0807 | DIODE 1SS355-TE-17 |
| D492 | 407 149 0807 | DIODE 1SS355-TE-17 |
| D5611 | 407 149 0807 | DIODE 1SS355-TE-17 |
| D5612 | 407 149 0807 | DIODE 1SS355-TE-17 |
| D5613 | 407 149 0807 | DIODE 1SS355-TE-17 |
| D5616 | 407 149 0807 | DIODE 1SS355-TE-17 |
| D5618 | 407 149 0807 | DIODE 1SS355-TE-17 |
| D5619 | 407 149 0807 | DIODE 1SS355-TE-17 |
| D5621 | 407 149 0807 | DIODE 1SS355-TE-17 |
| D5622 | 407 149 0807 | DIODE 1SS355-TE-17 |
| D5623 | 407 149 0807 | DIODE 1SS355-TE-17 |
| D5624 | 407 149 0807 | DIODE 1SS355-TE-17 |
| D5631 | 407 149 0807 | DIODE 1SS355-TE-17 |
| D5641 | 407 149 0807 | DIODE 1SS355-TE-17 |
| MISCELLANEOUS | | |
| X101 | 645 034 6118 | OSC,CRYSTAL 20.250MHZ |
| X1891 | 645 046 1415 | OSC,CERAMIC 4.00MHZ |
| X301 | 645 030 5863 | OSC,CRISTAL,14.318MHZ |
| X5301 | 645 053 7677 | OSC,CERAMIC 503.0KHZ |
| X9861 | 645 037 5217 | OSC,CERAMIC 6.00MHZ |
| | 645 041 5173 | OSC,CERAMIC 6.00MHZ |

## R/C BOARD

### 610 306 9005 ASSY,PWB,R/C- MP3A

| | | |
|---|---|---|
| CAPACITOR | | |
| C2811 | 403 283 6309 | CERAMIC 1U Z 10V |
| C2812 | 403 157 6602 | CERAMIC 470P K 50V |
| C2813 | 403 378 3107 | CERAMIC 47U Z 6.3V |
| C2814 | 403 378 3107 | CERAMIC 47U Z 6.3V |
| RESISTOR | | |
| R2811 | 401 105 5103 | MT-GLAZE 47 JA 1/16W |
| R2812 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| DIODE | | |
| D2811 | 407 223 1102 | ZENER DIODE 02DZ6.2Y(TPH3 |
| D2812 | 407 223 1102 | ZENER DIODE 02DZ6.2Y(TPH3 |
| MISCELLANEOUS | | |
| A2811 | 645 056 9111 | UNIT,REMOCON RECEIVER |

## SENSOR BOARD

### 610 306 9012 ASSY,PWB,SENSOR- MP3A

| | | |
|---|---|---|
| INTEGRATED CIRCUIT | | |
| IC8821 | 409 481 8602 | IC LM76CHMX-5 |
| CAPACITOR | | |
| C8821 | 403 155 1609 | CERAMIC 33P J 50V |
| C8822 | 403 155 1609 | CERAMIC 33P J 50V |
| C8823 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| RESISTOR | | |
| R8821 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R8822 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R8823 | 401 105 0603 | MT-GLAZE 10K JA 1/16W |
| R8831 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| MISCELLANEOUS | | |
| K88A | 645 005 6949 | PLUG,SIDE-ZR-SM3 6P |

## A/V BOARD

### 610 306 9029 ASSY,PWB,A/V -MP3A

| | | |
|---|---|---|
| TRANSISTOR | | |
| Q1001 | 405 134 5905 | TR 2SA1037AK-T146-R |
| | 405 147 2205 | TR 2SA1037AK-S-T146 |
| | 405 002 0308 | TR 2SA1037K T146 R |
| | 405 002 0407 | TR 2SA1037K T146 S |
| | 405 002 6706 | TR 2SA1179-M6-TB |
| | 405 002 6904 | TR 2SA1179-M7-TB |

| Key No. | Part No. | Description |
|---|---|---|
| | 405 163 1503 | TR 2SA1179N-M6-TB |
| | 405 163 2708 | TR 2SA1179N-M7-TB |
| Q1002 | 405 134 5905 | TR 2SA1037AK-T146-R |
| | 405 147 2205 | TR 2SA1037AK-S-T146 |
| | 405 002 0308 | TR 2SA1037K T146 R |
| | 405 002 0407 | TR 2SA1037K T146 S |
| | 405 002 6706 | TR 2SA1179-M6-TB |
| | 405 002 6904 | TR 2SA1179-M7-TB |
| | 405 163 1503 | TR 2SA1179N-M6-TB |
| | 405 163 2708 | TR 2SA1179N-M7-TB |
| Q1003 | 405 134 5905 | TR 2SA1037AK-T146-R |
| | 405 147 2205 | TR 2SA1037AK-S-T146 |
| | 405 002 0308 | TR 2SA1037K T146 R |
| | 405 002 0407 | TR 2SA1037K T146 S |
| | 405 002 6706 | TR 2SA1179-M6-TB |
| | 405 002 6904 | TR 2SA1179-M7-TB |
| | 405 163 1503 | TR 2SA1179N-M6-TB |
| | 405 163 2708 | TR 2SA1179N-M7-TB |
| Q1004 | 405 134 5905 | TR 2SA1037AK-T146-R |
| | 405 147 2205 | TR 2SA1037AK-S-T146 |
| | 405 002 0308 | TR 2SA1037K T146 R |
| | 405 002 0407 | TR 2SA1037K T146 S |
| | 405 002 6706 | TR 2SA1179-M6-TB |
| | 405 002 6904 | TR 2SA1179-M7-TB |
| | 405 163 1503 | TR 2SA1179N-M6-TB |
| | 405 163 2708 | TR 2SA1179N-M7-TB |
| Q1006 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q2001 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q2002 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q2003 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q5201 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q5202 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q5203 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q5204 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q5205 | 405 134 5905 | TR 2SA1037AK-T146-R |
| | 405 147 2205 | TR 2SA1037AK-S-T146 |
| | 405 002 0308 | TR 2SA1037K T146 R |
| | 405 002 0407 | TR 2SA1037K T146 S |
| | 405 002 6706 | TR 2SA1179-M6-TB |
| | 405 002 6904 | TR 2SA1179-M7-TB |
| | 405 163 1503 | TR 2SA1179N-M6-TB |
| | 405 163 2708 | TR 2SA1179N-M7-TB |
| INTEGRATED CIRCUIT | | |
| IC5201 | 409 530 7204 | IC AN5870SB |
| CAPACITOR | | |
| C1001 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C1007 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C1008 | 403 323 8805 | CERAMIC 2.2U Z 16V |
| C1051 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C2001 | 403 298 9609 | CERAMIC 0.1U K 16V |
| C2009 | 403 304 3300 | ELECT 47U M 16V |
| C2011 | 403 304 1801 | ELECT 100U M 6.3V |
| C2012 | 403 304 1801 | ELECT 100U M 6.3V |
| C2013 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C2014 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C2016 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C5001 | 403 157 3601 | CERAMIC 100P J 50V |
| C5002 | 403 157 3601 | CERAMIC 100P J 50V |
| C5003 | 403 157 3601 | CERAMIC 100P J 50V |
| C5004 | 403 157 3601 | CERAMIC 100P J 50V |
| C5201 | 403 323 8805 | CERAMIC 2.2U Z 16V |
| C5202 | 403 323 8805 | CERAMIC 2.2U Z 16V |
| C5203 | 403 323 8805 | CERAMIC 2.2U Z 16V |
| C5204 | 403 372 8702 | OS-SOLID 120U M 6.3 |
| C5206 | 403 283 6309 | CERAMIC 1U Z 10V |
| C5207 | 403 233 3808 | CERAMIC 10P C 50V |
| C5208 | 403 323 8805 | CERAMIC 2.2U Z 16V |
| C5209 | 403 283 6309 | CERAMIC 1U Z 10V |
| C5211 | 403 314 5905 | CERAMIC 0.47U K 16V |
| C5212 | 403 233 3808 | CERAMIC 10P C 50V |
| C5214 | 403 323 8805 | CERAMIC 2.2U Z 16V |
| C5216 | 403 233 3808 | CERAMIC 10P C 50V |
| C5217 | 403 323 8805 | CERAMIC 2.2U Z 16V |
| C5218 | 403 304 3300 | ELECT 47U M 16V |
| C5219 | 403 207 0307 | CERAMIC 1U Z 16V |
| C5226 | 403 149 9208 | CERAMIC 0.01U Z 50V |
| C5228 | 403 348 5803 | CERAMIC 0.47U K 10V |
| C5229 | 403 298 9609 | CERAMIC 0.1U K 16V |
| RESISTOR | | |
| R1001 | 401 260 4102 | MT-GLAZE 75 JA 1/3W |
| R1002 | 401 260 4102 | MT-GLAZE 75 JA 1/3W |
| R1003 | 401 260 4102 | MT-GLAZE 75 JA 1/3W |
| R1004 | 401 105 5400 | MT-GLAZE 47K JA 1/16W |
| R1006 | 401 105 5400 | MT-GLAZE 47K JA 1/16W |
| R1007 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R1008 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R1012 | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W |
| R1013 | 401 105 2706 | MT-GLAZE 220 JA 1/16W |
| R1014 | 401 105 2706 | MT-GLAZE 220 JA 1/16W |
| R1016 | 401 105 2706 | MT-GLAZE 220 JA 1/16W |
| R1017 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R1018 | 401 105 2805 | MT-GLAZE 2.2K JA 1/16W |
| R1019 | 401 105 2805 | MT-GLAZE 2.2K JA 1/16W |
| R1021 | 401 105 2805 | MT-GLAZE 2.2K JA 1/16W |

| Key No. | Part No. | Description |
|---|---|---|
| R1022 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R1023 | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W |
| R1024 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1026 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1027 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1028 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1029 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R1031 | 401 105 4601 | MT-GLAZE 3.9K JA 1/16W |
| R1032 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R1033 | 401 105 3000 | MT-GLAZE 220K JA 1/16W |
| R1051 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R2001 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R2002 | 401 260 4102 | MT-GLAZE 75 JA 1/3W |
| R2003 | 401 260 4102 | MT-GLAZE 75 JA 1/3W |
| R2004 | 401 260 4102 | MT-GLAZE 75 JA 1/3W |
| R2011 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2012 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2013 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2022 | 401 105 1402 | MT-GLAZE 150 JA 1/16W |
| R2023 | 401 105 1402 | MT-GLAZE 150 JA 1/16W |
| R2024 | 401 105 1402 | MT-GLAZE 150 JA 1/16W |
| R2026 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R2028 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R2031 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R2036 | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W |
| R2037 | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W |
| R5001 | 401 105 5509 | MT-GLAZE 470K JA 1/16W |
| R5002 | 401 105 5509 | MT-GLAZE 470K JA 1/16W |
| R5003 | 401 105 5509 | MT-GLAZE 470K JA 1/16W |
| R5004 | 401 105 5509 | MT-GLAZE 470K JA 1/16W |
| R5006 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R5007 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R5008 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R5009 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R5201 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R5202 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R5203 | 401 105 0306 | MT-GLAZE 10 JA 1/16W |
| R5208 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R5209 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R5213 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R5214 | 401 276 4707 | MT-GLAZE 0.000 ZA 1/3W |
| R5216 | 401 105 2805 | MT-GLAZE 2.2K JA 1/16W |
| R5218 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R5219 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R5221 | 401 105 2706 | MT-GLAZE 220 JA 1/16W |
| R5222 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R5223 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| R5224 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R5226 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R5227 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R5228 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R5229 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R5231 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R5232 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R5233 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R5234 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R5236 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R5237 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R5238 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R5239 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R5242 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R5243 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R5244 | 401 038 0503 | MT-GLAZE 22 JA 1/10W |
| R5246 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R5248 | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R5249 | 401 105 0405 | MT-GLAZE 100 JA 1/16W |
| COIL | | |
| L1001 | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W |
| L1002 | 645 059 2409 | FILTER,EMI 35PF |
| L1003 | 645 059 2409 | FILTER,EMI 35PF |
| L1004 | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W |
| L1006 | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W |
| L1007 | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W |
| L1008 | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W |
| L1009 | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W |
| L1011 | 645 059 2416 | FILTER,EMI 18PF |
| L1012 | 645 059 2416 | FILTER,EMI 18PF |
| L1013 | 645 059 2416 | FILTER,EMI 18PF |
| L1041 | 645 059 2393 | FILTER,EMI 20MHZ |
| L1042 | 645 059 2393 | FILTER,EMI 20MHZ |
| L2001 | 645 059 2393 | FILTER,EMI 20MHZ |
| L2002 | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W |
| L2003 | 645 059 2386 | FILTER,EMI 100MHZ |
| L2004 | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W |
| L2006 | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W |
| L2007 | 645 059 2386 | FILTER,EMI 100MHZ |
| L2008 | 645 059 2386 | FILTER,EMI 100MHZ |
| L5001 | 645 059 2393 | FILTER,EMI 20MHZ |
| L5002 | 645 059 2393 | FILTER,EMI 20MHZ |
| L5003 | 645 059 2393 | FILTER,EMI 20MHZ |
| L5004 | 645 059 2393 | FILTER,EMI 20MHZ |
| DIODE | | |
| D1001 | 407 221 7106 | ZENER DIODE UDZS-TE-1712B |
| D1002 | 407 221 7106 | ZENER DIODE UDZS-TE-1712B |
| D1051 | 407 179 0501 | ZENER DIODE UDZ6.2B-TE-17 |
| D2001 | 407 221 7106 | ZENER DIODE UDZS-TE-1712B |
| D2002 | 407 223 1102 | ZENER DIODE 02DZ6.2Y(TPH3 |
| MISCELLANEOUS | | |
| K10A | 645 009 8093 | SOCKET,D-SUB 15P |
| K10B | 610 010 8295 | SOCKET,DIN 4P |
| K10C | 610 010 3689 | JACK,RCA |
| K20A | 645 028 0382 | SOCKET,USB 4P |
| K20B | 645 048 6739 | SOCKET,DIN 8P |
| K30A | 645 000 2571 | JACK,PHONE D8.0 |
| K30B | 645 000 2571 | JACK,PHONE D8.0 |
| SC1001 | 645 045 7449 | SURGE-ABSORBER |
| SC1002 | 645 045 7449 | SURGE-ABSORBER |
| SC1003 | 645 045 7449 | SURGE-ABSORBER |
| SC1041 | 645 045 7449 | SURGE-ABSORBER |
| SC1042 | 645 045 7449 | SURGE-ABSORBER |
| SC2001 | 645 045 7449 | SURGE-ABSORBER |
| SC2002 | 645 045 7449 | SURGE-ABSORBER |
| SC2003 | 645 045 7449 | SURGE-ABSORBER |
| SC5001 | 645 045 7449 | SURGE-ABSORBER |
| SC5002 | 645 045 7449 | SURGE-ABSORBER |
| SC5003 | 645 045 7449 | SURGE-ABSORBER |
| SC5004 | 645 045 7449 | SURGE-ABSORBER |
| SC9801 | 645 045 7449 | SURGE-ABSORBER |
| SC9802 | 645 045 7449 | SURGE-ABSORBER |
| SW10A | 645 042 8104 | SWITCH,PUSH 1P-1TX1 |

## CONTROL BOARD

### 610 306 9036 ASSY,PWB,CONT-MP3A

| | | |
|---|---|---|
| TRANSISTOR | | |
| Q2861 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q2862 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |

| Key No. | Part No. | Description |
|---|---|---|
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q2863 | 405 014 4509 | TR 2SC2412K T146 R |
| | 405 014 4608 | TR 2SC2412K T146 S |
| | 405 015 8704 | TR 2SC2812-L6-TB |
| | 405 015 8902 | TR 2SC2812-L7-TB |
| | 405 163 1602 | TR 2SC2812N-L6-TB0 |
| | 405 163 1701 | TR 2SC2812N-L7-TB0 |
| Q2864 | 405 134 5905 | TR 2SA1037AK-T146-R |
| | 405 147 2205 | TR 2SA1037AK-S-T146 |
| | 405 002 0308 | TR 2SA1037K T146 R |
| | 405 002 0407 | TR 2SA1037K T146 S |
| | 405 002 6706 | TR 2SA1179-M6-TB |
| | 405 002 6904 | TR 2SA1179-M7-TB |
| | 405 163 1503 | TR 2SA1179N-M6-TB |
| | 405 163 2708 | TR 2SA1179N-M7-TB |
| CAPACITOR | | |
| C2861 | 403 164 0204 | CERAMIC 0.1U Z 25V |
| C2862 | 403 379 6701 | CERAMIC 10U K 16V |
| RESISTOR | | |
| R2862 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R2864 | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W |
| R2866 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R2868 | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W |
| R2869 | 401 105 4502 | MT-GLAZE 390 JA 1/16W |
| R2872 | 401 105 6506 | MT-GLAZE 680 JA 1/16W |
| R2874 | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W |
| R2876 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R2878 | 401 105 0504 | MT-GLAZE 1K JA 1/16W |
| R2891 | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W |
| R6801 | 401 105 5103 | MT-GLAZE 47 JA 1/16W |
| R6802 | 401 105 5103 | MT-GLAZE 47 JA 1/16W |
| R6803 | 401 105 5103 | MT-GLAZE 47 JA 1/16W |
| DIODE | | |
| D2861 | 407 234 6103 | LED SML-310YT-K-T86 |
| | 407 234 4000 | LED SML-310YT-L-T86 |
| | 407 234 4109 | LED SML-310YT-M-T86 |
| D2862 | 407 234 3805 | LED SML-310LT-M-T86 |
| | 407 234 3904 | LED SML-310LT-N-T86 |
| D2863 | 407 222 4807 | LED SML-521MUW T86 |
| D2866 | 407 223 1102 | ZENER DIODE 02DZ6.2Y(TPH3 |
| D2867 | 407 223 1102 | ZENER DIODE 02DZ6.2Y(TPH3 |
| D2868 | 407 223 1102 | ZENER DIODE 02DZ6.2Y(TPH3 |
| D2869 | 407 223 1102 | ZENER DIODE 02DZ6.2Y(TPH3 |
| D2871 | 407 223 1102 | ZENER DIODE 02DZ6.2Y(TPH3 |
| D2872 | 407 223 1102 | ZENER DIODE 02DZ6.2Y(TPH3 |
| D6801 | 407 149 0807 | DIODE 1SS355-TE-17 |
| D6802 | 407 149 0807 | DIODE 1SS355-TE-17 |
| D6803 | 407 149 0807 | DIODE 1SS355-TE-17 |
| D6804 | 407 223 1102 | ZENER DIODE 02DZ6.2Y(TPH3 |
| D6806 | 407 223 1102 | ZENER DIODE 02DZ6.2Y(TPH3 |
| D6807 | 407 223 1102 | ZENER DIODE 02DZ6.2Y(TPH3 |
| D6808 | 407 223 1102 | ZENER DIODE 02DZ6.2Y(TPH3 |
| D6809 | 407 223 1102 | ZENER DIODE 02DZ6.2Y(TPH3 |
| D6811 | 407 223 1102 | ZENER DIODE 02DZ6.2Y(TPH3 |
| MISCELLANEOUS | | |
| SW6801 | 645 026 2791 | SWITCH,PUSH 1P-1TX1 |
| SW6802 | 645 026 2791 | SWITCH,PUSH 1P-1TX1 |
| SW6804 | 645 026 2791 | SWITCH,PUSH 1P-1TX1 |
| SW6806 | 645 026 2791 | SWITCH,PUSH 1P-1TX1 |
| SW6807 | 645 026 2791 | SWITCH,PUSH 1P-1TX1 |
| SW6808 | 645 026 2791 | SWITCH,PUSH 1P-1TX1 |
| SW6809 | 645 026 2791 | SWITCH,PUSH 1P-1TX1 |
| SW6811 | 645 026 2791 | SWITCH,PUSH 1P-1TX1 |

| Key No. | Part No. | Description |
|---|---|---|

## FILTER BOARD

### 610 308 1021 ASSY,PWB,FILTER -MP3A

| | | |
|---|---|---|
| CAPACITOR | | |
| ⚠C601 | 404 081 4702 | MT-POLYEST 0.22U M 275V |
| ⚠C603 | 404 081 4702 | MT-POLYEST 0.22U M 275V |
| ⚠C604 | 404 081 4702 | MT-POLYEST 0.22U M 275V |
| ⚠C606 | 404 073 4505 | CERAMIC 2200P K 250V |
| RESISTOR | | |
| R601 | 401 008 8607 | CARBON 220K JA 1/2W |
| VARIABLE RESISTOR | | |
| ⚠VA601 | 408 018 9808 | VARISTOR ENC471D-14AS |
| COIL | | |
| ⚠L601 | 645 041 4961 | LINE FILTER |
| ⚠L602 | 645 041 4961 | LINE FILTER |
| MISCELLANEOUS | | |
| ⚠F601 | 423 022 2102 | FUSE 250V 4A |
| F601A | 645 006 4760 | HOLDER,FUSE |
| F601B | 645 006 4760 | HOLDER,FUSE |
| ⚠K601 | 645 055 6647 | SOCKET,INLET AC 3P |

## SW BOARD

### 610 308 1038 ASSY,PWB,SW-MP3A

| | | |
|---|---|---|
| MISCELLANEOUS | | |
| SW8801 | 645 063 5175 | SWITCH,PUSH 2P-2TX3 |

| Key No. | Part No. | Description |
|---|---|---|

## ACCESSORIES

**PRINTED MATTER / OWNER'S MANUAL**

| | | |
|---|---|---|
| (English) | 610 308 4503 | OWNER'S MANUAL-MP3A |
| (Germany) | 610 308 4510 | OWNER'S MANUAL-MP3A-D |
| (French) | 610 308 4527 | OWNER'S MANUAL-MP3A-F |
| (Italian) | 610 308 4534 | OWNER'S MANUAL-MP3A-I |
| (Spanish) | 610 308 4541 | OWNER'S MANUAL-MP3A-E |

**REMOTE CONTROL**

| | | |
|---|---|---|
| | 645 061 7904 | ASSY,REMOCON CXPK |
| | 645 063 7896 | ASSY,REMOCON CXPW |
| | 610 308 3612 | RC-BATTERY LID-CXPK |

**AC CORD**

| | | |
|---|---|---|
| ⚠ | 645 064 9103 | CORD,POWER-1.85MK,US |

**CABLE AND ADAPTER**

| | | |
|---|---|---|
| | 645 063 8022 | UNIT,USB IR RECEIVER |
| | 645 057 2999 | CABLE,INTERFACE VGA |

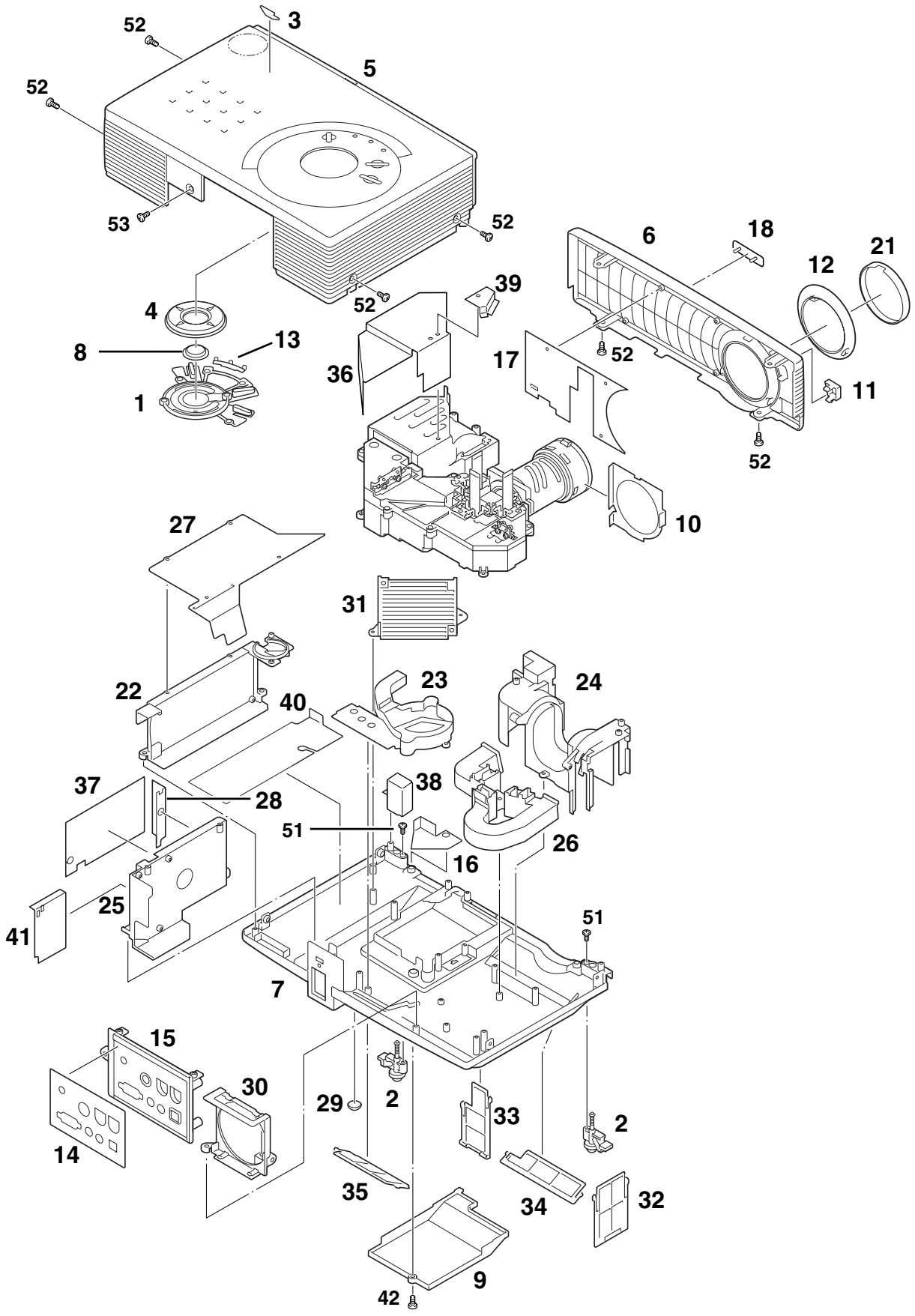
**MISCELLANEOUS**

| | | |
|---|---|---|
| | 610 294 3351 | COVER,DUST-MA8A |
| | 610 309 4618 | STRAP CAP MF7A |
| | 610 308 4442 | CARRY BAG-MP3A |

# ■ Mechanical Parts List

**Note: Parts order must contain Chassis No., Part No., and Descriptions.**

## ● CABINET PARTS

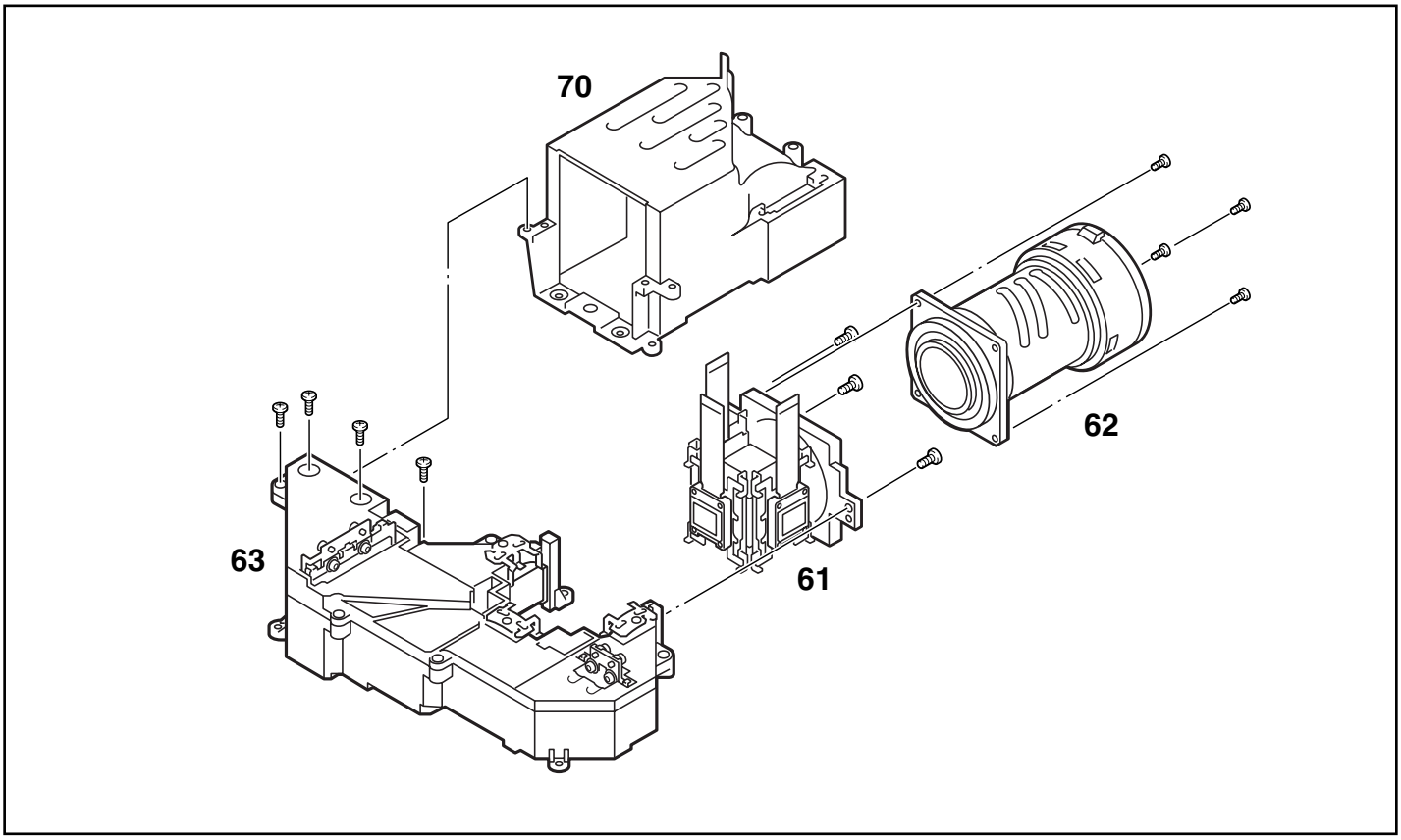


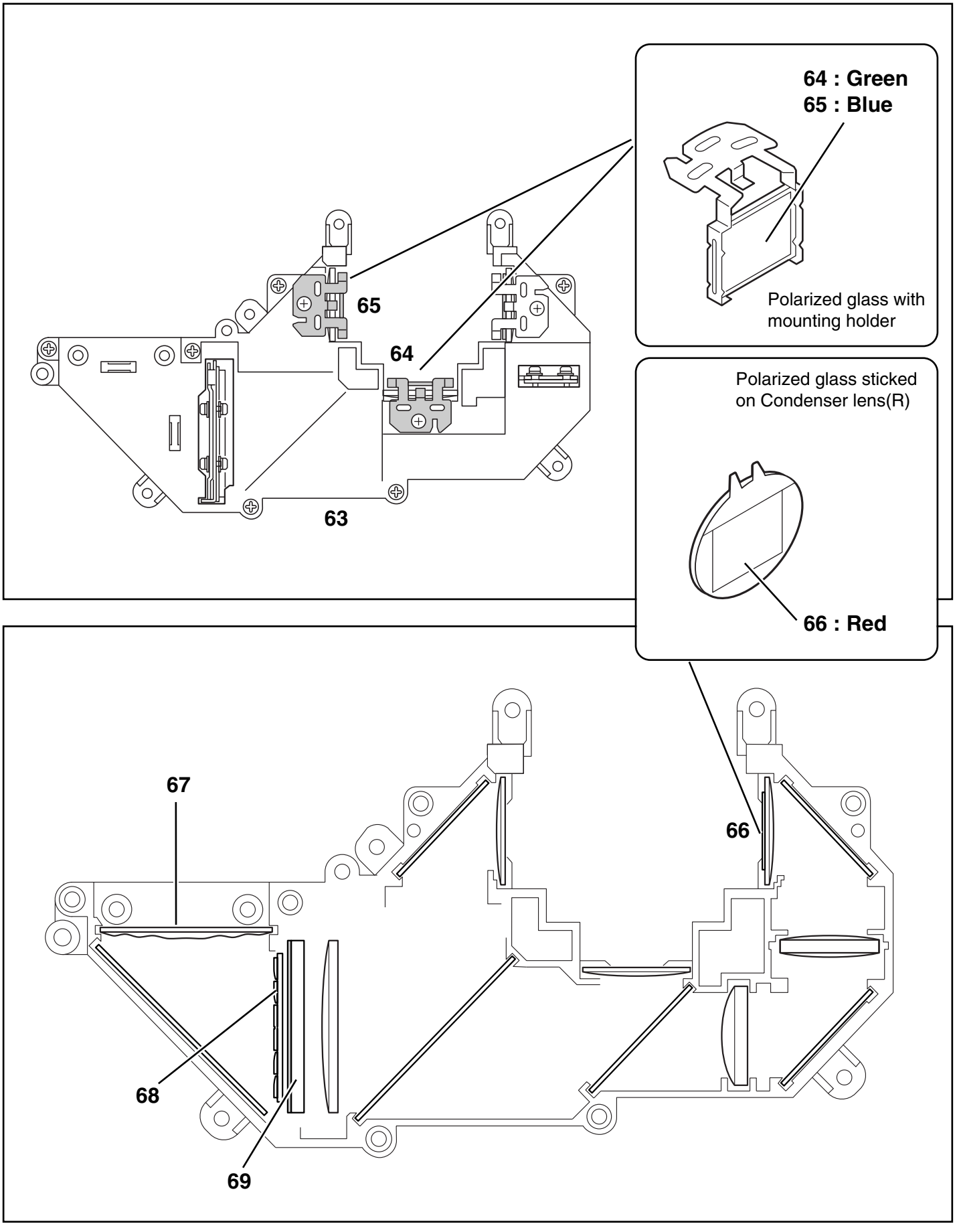
| Key No. | Part No. | Description |
|---|---|---|
| **CABINET PARTS** | | |
| 1 | 610 308 3032 | ASSY,BUTTON-MP3A |
| 2 | 610 308 2646 | ASSY,STAND LEG-MP3A |
| 3 | 610 289 1812 | BADGE V MARK S-MK6A |
| 4 | 610 308 3124 | BUTTON SEESAW-MP3A |
| 5 | 610 308 2660 | CABINET TOP-MP3A |
| 6 | 610 308 2677 | CABINET FRONT MP3A |
| 7 | 610 308 2707 | CABINET BOTTOM-MP3A |
| 8 | 610 308 3223 | CAP BUTTON SELECT-MP3A |
| 9 | 610 308 2769 | COVER LAMP-MP3A |
| 10 | 610 311 0875 | COVER LENS SHEET-MP3A |
| 11 | 610 308 2790 | DEC RC F-MP3A |
| 12 | 610 308 3315 | DEC RING-MP3A |
| 13 | 610 308 3322 | DEC LED-MP3A |
| 14 | 610 308 2806 | DEC AV SHEET-MP3A |
| 15 | 610 308 2981 | PANEL AV-MP3A |
| 16 | 610 311 4521 | SPACER BOTTOM C-MP3A |
| 17 | 610 311 1025 | SPACER FRONT MP3A |
| 18 | 645 047 8031 | BADGE,SANYO*26.2X5.7L26.0 |
| **CHASSIS PARTS** | | |
| 21 | 610 308 2721 | CAP LNS-MP3A |
| 22 | 610 308 2776 | COVER, POWER BTM-MP3A |
| 23 | 610 308 3230 | COVER, DUCT PBS-MP3A |
| 24 | 610 308 3261 | COVER, DUCT PNL A-MP3A |
| 25 | 610 309 1815 | COVER LAMP BST-MP3A |
| 26 | 610 309 2195 | COVER, DUCT PNL B-MP3A |
| 27 | 610 308 3308 | COVER POWER TOP-MP3A |
| 28 | 610 311 4804 | COVER BST SHEET-MP3A |
| 29 | 610 311 0912 | DEC LEG-MP3A |
| 30 | 610 308 3490 | MOUNTING FN-MP3A |
| 31 | 610 308 3513 | MOUNTING LMP FAN-MP3A |
| 32 | 610 308 3520 | PANEL NET S-MP3A |
| 33 | 610 308 3537 | PANEL NET F-MP3A |
| 34 | 610 308 3544 | PANEL NET B-MP3A |
| 35 | 610 308 3551 | PANEL NET PBS-MP3A |
| 36 | 610 311 0998 | SPACER OPT LMP MP3A |
| 37 | 610 308 3636 | SPACER SHEET-POWER MP3A |
| 38 | 610 311 1032 | SPACER LEG MP3A |
| 39 | 610 311 2596 | SPACER TEMPB SW-MP3A |
| 40 | 610 311 4866 | SPACER POWERMP3A |
| 41 | 610 311 5153 | SPACER BST-MP3A |

| Key No. | Part No. | Description |
|---|---|---|
| **SCREWS-CABINET-** | | |
| 51 | 411 025 6500 | SCR S-TPG BIN 3X8 |
| 52 | 411 001 8801 | SCR BIN 3X6 |
| 53 | 411 031 9304 | SCR BIN 3X8 |
| **SCREWS-CHASSIS-** | | |
| **OPTICAL PARTS** | | |
| 61 | 610 311 0073 | ASSY,LCD PNL/PRISM-MP3A |
| 62 | 645 061 9229 | LENS,PROJECTION |
| 63 | 645 061 9205 | ASSY,OPTICAL |
| | (Including Key No.64-69) | |
| 64 | 645 061 9496 | POLARIZED GLASS(IN/G) |
| 65 | 645 061 9502 | POLARIZED GLASS(IN/B) |
| 66 | 645 065 2530 | LENS CONDENSER(R) |
| 67 | 645 065 2547 | LENS INTEGRATOR(IN) |
| 68 | 645 065 2554 | LENS INTEGRATOR(OUT) |
| 69 | 645 065 2561 | PRISM(PBS) |
| 70 | 610 308 3803 | OPTICAL LP-MP3A |

# ■ Optical Parts List

**Note: Parts order must contain Chassis No., Part No., and Descriptions.**




64 : Green
65 : Blue
Polarized glass with mounting holder
Polarized glass sticked on Condenser lens(R)
66 : Red
65
64
63
67
66
68
69

(MP3A) Sep. 2003 BB 400 Printed in Japan

**SANYO Electric Co., Ltd.**

# ■ Diagrams & Drawings

## Schematic Diagrams
## Printed Wiring Board Drawings

| Model | Chassis No. |
|---|---|
| PLC-SW30 | MP3-SW3000 |

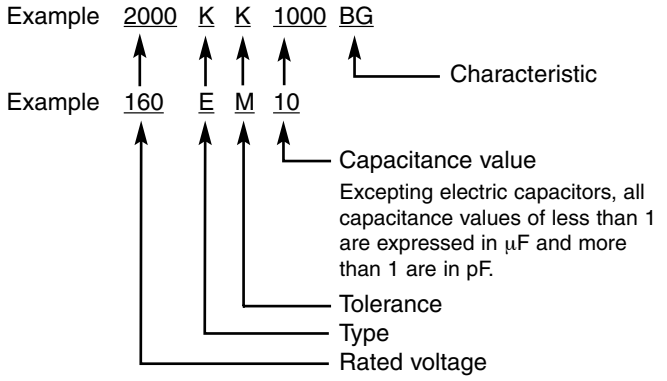
**These schematic diagrams and printed wiring board drawings are part of the service manual original for chassis No. MP3-SW3000 model PLC-SW30.**
**File with the service manual No. SM5110522-00.**

**Note:**
**All the information of part numbers and values indicated on these diagrams are at the beginning of production. To improve the performance, there may be some differences to the actual set. When you order the service parts, use service parts code mentioned on the parts list in this service manual.**

# ■ Parts description and reading in schematic diagram

1. The parts specification of resistors, capacitors and coils are expressed in designated code. Please check the parts description by the following code table.
2. Some of transistors and diodes are indicated in mark for the substitution of parts name. Please check the parts name by the following code table.
3. Voltages and waveforms were taken with a video color bar signal(1Vp-p at 75 ohms terminated) and controls to normal.
4. Voltages were taken with a high-impedance digital voltmeter.

## Capacitor Reading


Example 2000 K K 1000 BG
Characteristic
Example 160 E M 10
Capacitance value
Excepting electric capacitors, all capacitance values of less than 1 are expressed in μF and more than 1 are in pF.
Tolerance
Type
Rated voltage

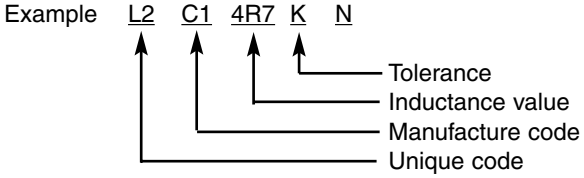
**Material table**

| Mark | Material |
|---|---|
| E | Electrolytic |
| P | Electrolytic (non-polarized) |
| C | Ceramic (temperature compensation) |
| K | Ceramic |
| F | Polyester |
| N | Polypropylene |
| M | Metalized polypropylene |
| H | Metalized polypromylar |
| B | Ceramic (semiconductor) |
| G | Metalized polyestel |
| Y | Composite film |
| S | Styrol |
| T | Tantalum oxide solid electrolytic |
| U | Organic semiconductive electrolyte |
| D | Electric double layer electrolytic |

**Tolerance table**

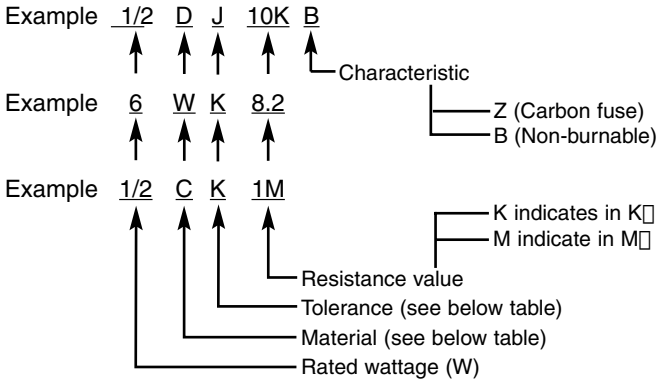
| Mark | Tolerance |
|---|---|
| A | not specified |
| B | ±0.1 |
| C | ±0.25 |
| D | ±0.5 |
| F | ±1 |
| G | ±2 |
| E | ±2.5 |
| H | ±3 |
| J | ±5 |
| K | ± 0 |
| M | ±20 |
| N | ±30 |
| P | +100 -0 |
| Q | +30 -10 |
| T | +50 -10 |
| U | +75 -10 |
| V | +20 -10 |
| W | +100 -10 |
| X | +40 -20 |
| Y | +150 -10 |
| Z | +80 -20 |

## Coil Reading




| Mark | Tolerance (nH) | Mark | Tolerance (%) |
|---|---|---|---|
| C | ±0.25 | G | ±2 |
| D | ±0.5 | J | ±5 |
| S | ±0.3 | K | ±10 |
| A | ±0.2 | L | ±15 |
| | | M | ±20 |

## Resistor Reading




Note: Resistor which is indicated with resistance value only are 1/6W carbon resistor. Resistor which is indicated with material, tolerance and value are 1/4W rated wattage.

**Material table**

| Mark | Material |
|---|---|
| D | Carbon |
| N | Metal film |
| S | Oxide metal film |
| C | Solid |
| G | Metal glaze |
| W | Wire wounding or cement |
| H | Ceramic |
| F | Fusible |

**Tolerance table**

| Mark | Tolerance |
|---|---|
| A | ±0.05 |
| B | ±0.1 |
| C | ±0.25 |
| D | ±0.5 |
| F | ±1 |
| G | ±2 |
| J | ±5 |
| K | ±10 |
| M | ±20 |
| P | +5 -15 |
| Z | used in 0 ohm |

## Diode/Transistor Type Reading

**Diode**

| Mark | Type number |
|---|---|
| R | 1S2076A,1S2473,1N4148 |
| AA | 1S2076A,1S2473,1SS133,1N4148 |

**Transistor**

(1) NPN type

| Mark | Type number | | | | |
|---|---|---|---|---|---|
| -- | 2SC536 | 2SC945A | 2SC1815 | 2SC1740S | |
| AD | NF, NG | PA, QA | Y, GR | Q, R, S | |
| AE | NF, NG | PA, QA, RA | O, Y, GR | Q, R, S | |

(2) PNP type

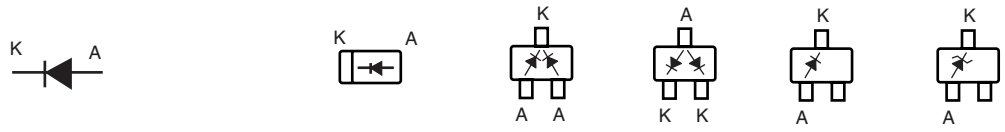
| Mark | Type number | | | | |
|---|---|---|---|---|---|
| -- | 2SA608 | 2SA564A | 2SA1015 | 2SA933S | |
| AB | NF | R | Y, GR | R | |
| AC | NF | Q, R | O, Y, GR | Q, R | |

(3) Chip type

| Mark | Type number | | | | |
|---|---|---|---|---|---|
| -- | 2SA1179/N | 2SA1037K | 2SA1037AK | 2SC2812/N | 2SC2412K |
| AJ | M6, M7 | R, S | R, S | | |
| AH | | | | L6, L7 | R, S |

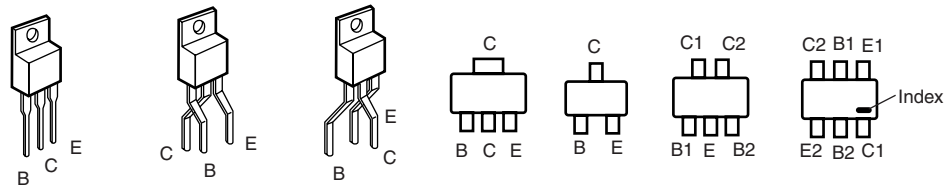
# ■ Pin description of diode, transistor and IC

## ● Diode




K: Cathode
A: Anode

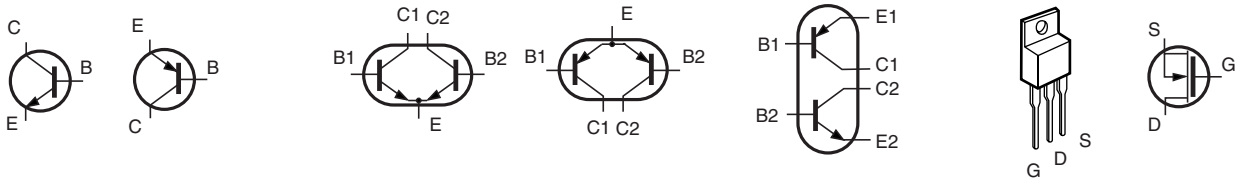
## ● Transistor/FET



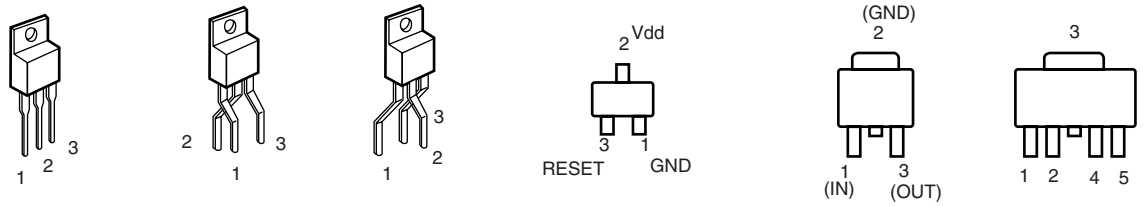

C: Collector
B: Base
E: Emitter

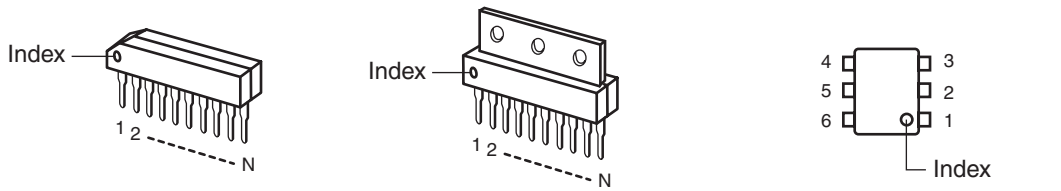
D: Drain
G: Gate
S: Source

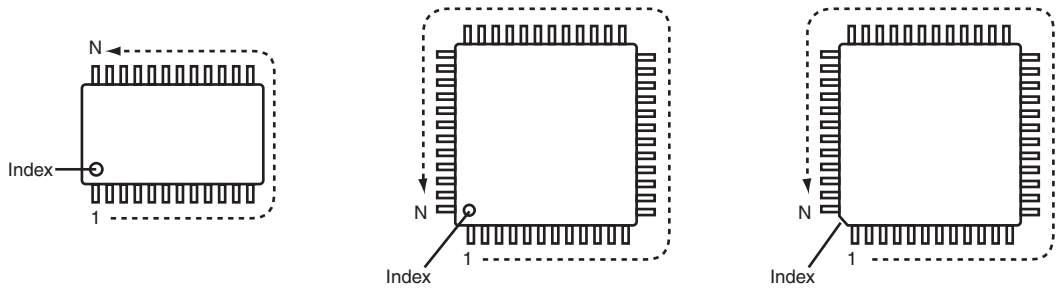
FET

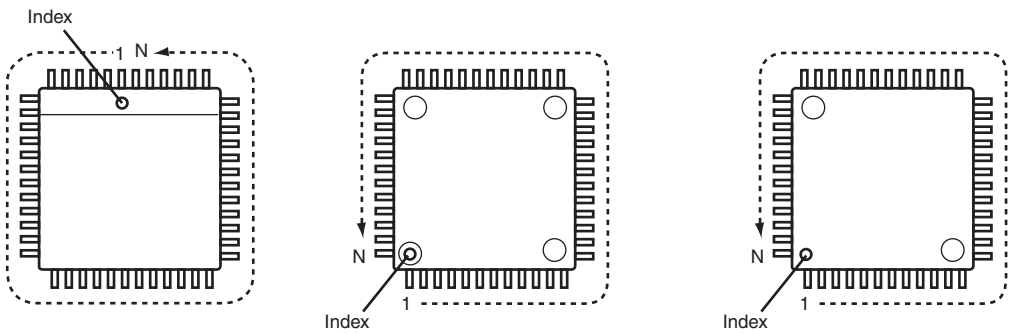



## ● IC

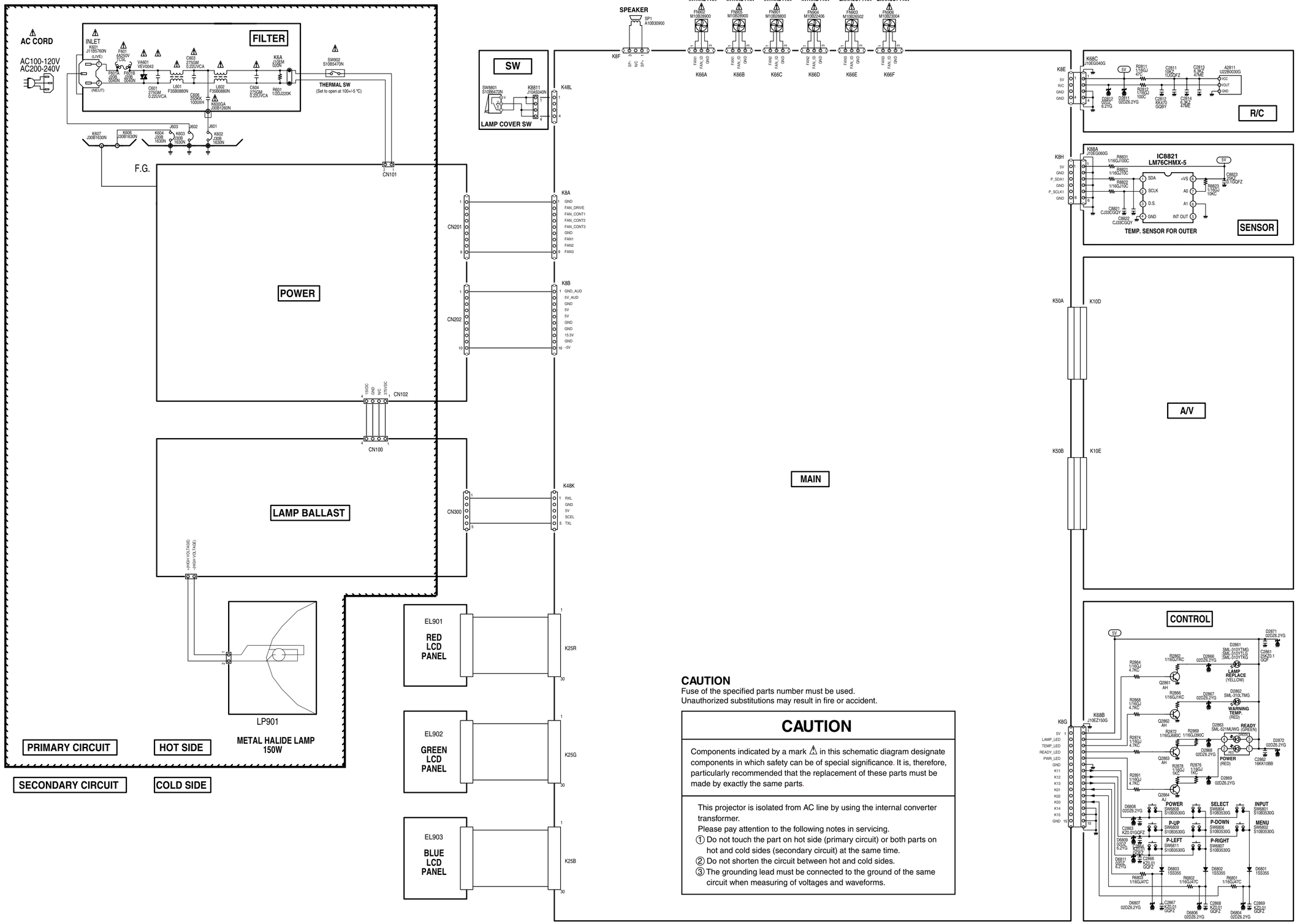


# ■ Schematic Diagrams




**CAUTION**
Fuse of the specified parts number must be used.
Unauthorized substitutions may result in fire or accident.

## CAUTION

Components indicated by a mark ⚠ in this schematic diagram designate components in which safety can be of special significance. It is, therefore, particularly recommended that the replacement of these parts must be made by exactly the same parts.

This projector is isolated from AC line by using the internal converter transformer.
Please pay attention to the following notes in servicing.
① Do not touch the part on hot side (primary circuit) or both parts on hot and cold sides (secondary circuit) at the same time.
② Do not shorten the circuit between hot and cold sides.
③ The grounding lead must be connected to the ground of the same circuit when measuring of voltages and waveforms.

**Schematic Diagrams Overview**

# Schematic Diagrams
# AV Board
# Main Board P.1/3

# Schematic Diagrams
# Main Board P.2/3

IC9401
LC24085BT-UG4
DIGITAL TURBO

IC401
L3E07070K0A
<TOP_VIEW>

IC501
L3E06100D0A
SAMPLE & HOLD
LCD DRIVER

IC531
L3E06100D0A
SAMPLE & HOLD
LCD DRIVER

IC561
L3E06100D0A
SAMPLE & HOLD
LCD DRIVER

IC301
SCALER

POWER
"CN201"

POWER
"CN202"

R/C
"K68C"

BALLAST
"CN300"

SW
"K8811"

IC5631
SI-3033ZD-TL
3.3V_REG.

IC491
SI-3018KS-TL
1.8V_REG.

IC5641
SI-3012KS-TL

IC5642
BA09FP-E2

IC3591
LA6358NM-TP-T1

IC3501
TC4053BF(EL)

IC3521
LM7171AIMX
;LM7171BIMX

IC3531
LT1206CS8

IC3551
M62393FP
D/A CONVERTER

IC3561
M62398FP
D/A CONVERTER

IC3571
M62398FP
D/A CONVERTER

TPB1
TPG1
TPR1
TPY1
TP2531
TP2561

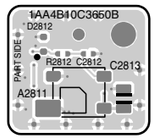
B_LCD PANEL
G_LCD PANEL
R_LCD PANEL

NRS

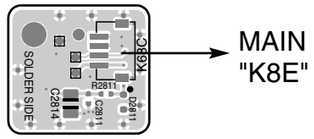
**Schematic Diagrams**
**Main Board P.3/3**

# ■ Printed Wiring Board Diagrams

**R/C (SIDE:A)**




**R/C (SIDE:B)**

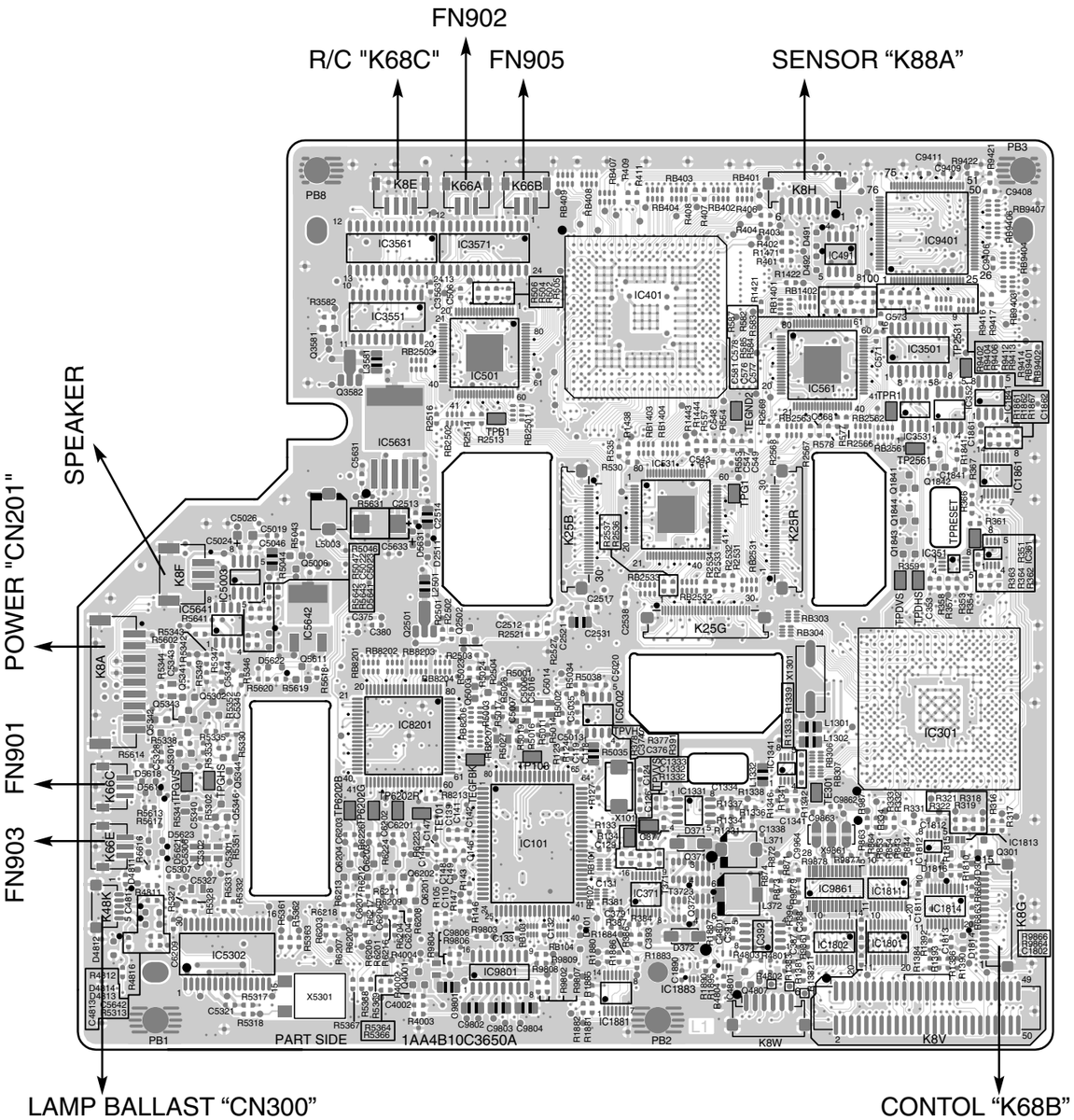



## ⚠ CAUTION

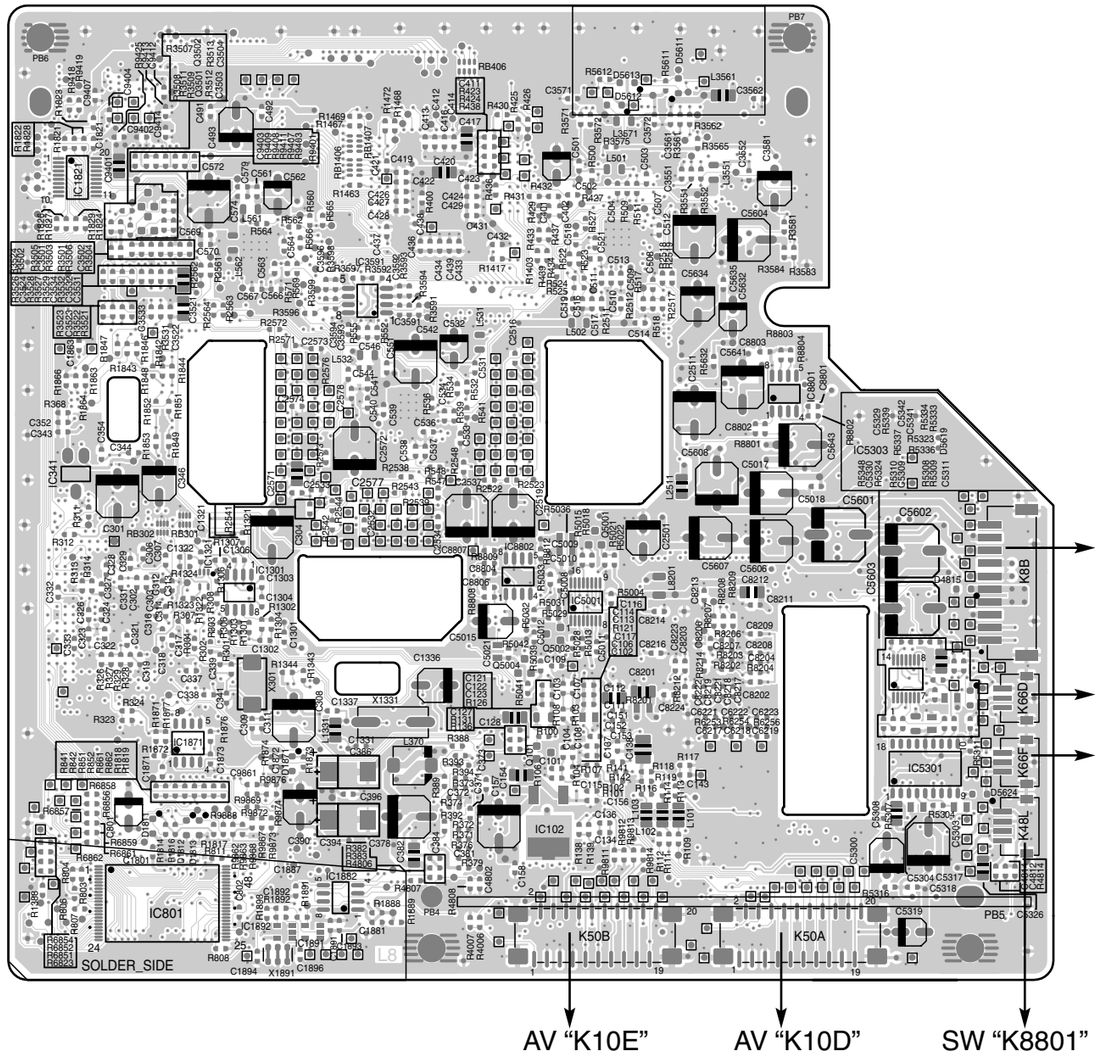
This projector is isolated from AC line by using the internal converter transformer.
Please pay attention to the following notes in servicing

1. Do not touch the part on hot side (primary circuit) or both parts on hot and cold sides (secondary circuit) at the same time.
2. Do not shorten the circuit between hot and cold sides.
3. The grounding lead must be connected to the ground of the same circuit when measuring of voltages and waveforms.

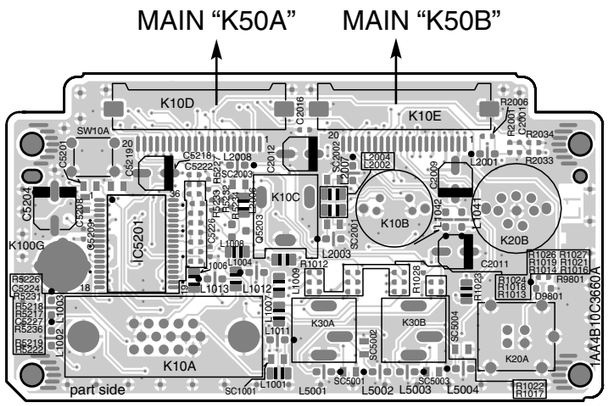
**MAIN (SIDE:A)**



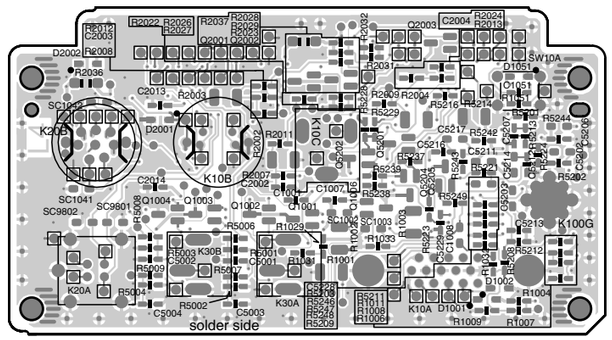

**MAIN (SIDE:B)**



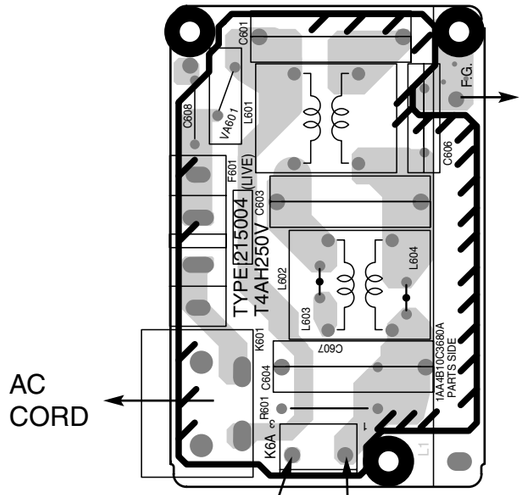
## AV (SIDE:A)



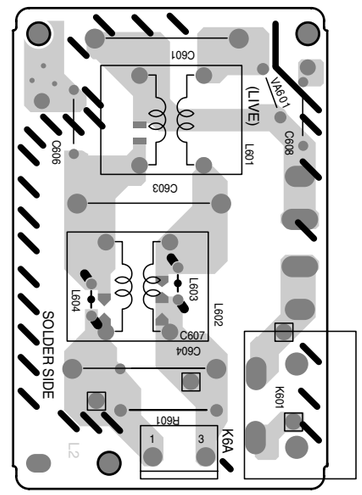

## AV (SIDE:B)




## FILTER (SIDE:A)



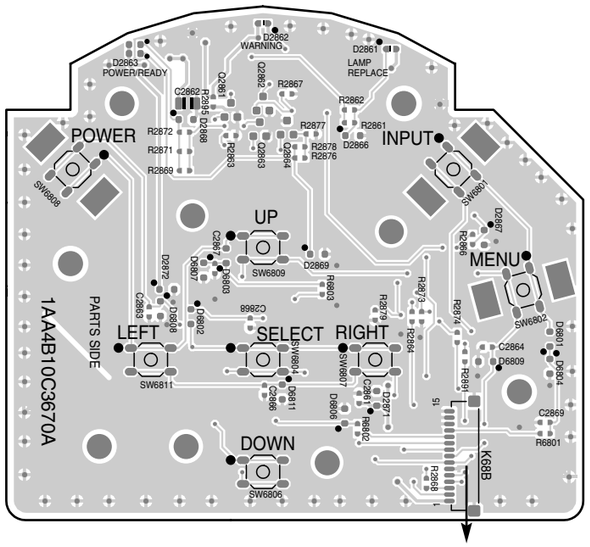

## FILTER (SIDE:B)




AC CORD

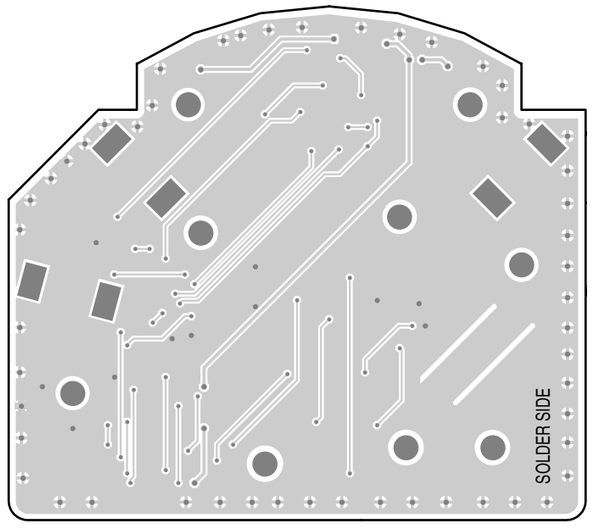
SW902(Thermal SW)

## CONTROL (SIDE:A)

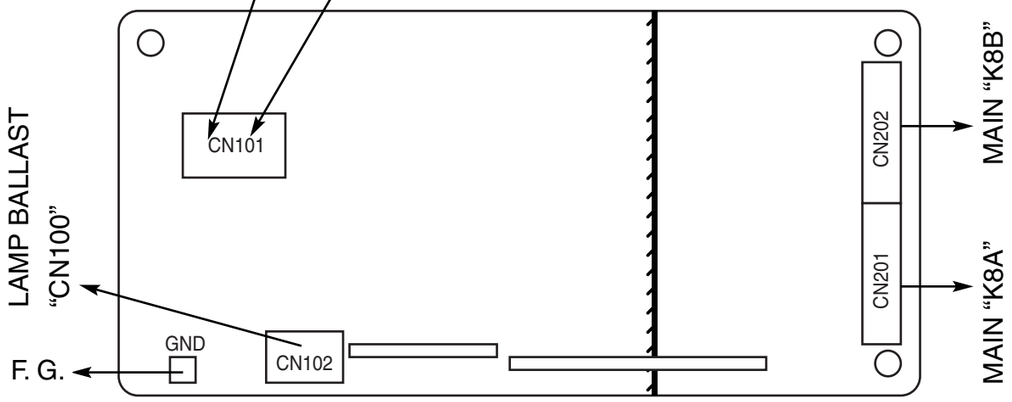



MAIN “K8G”

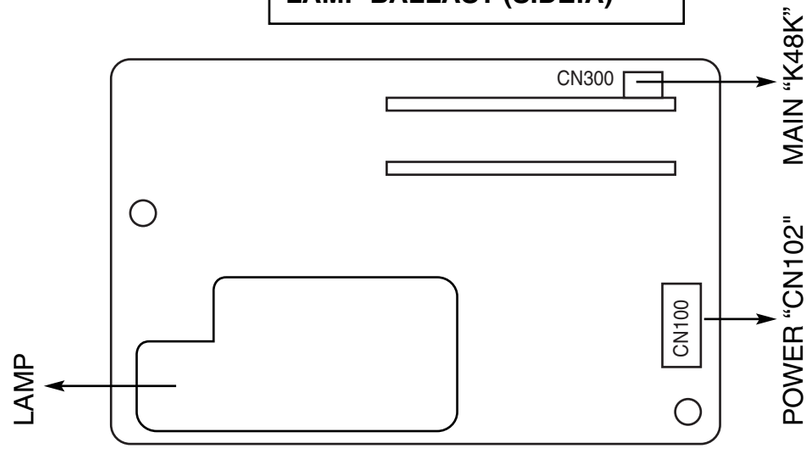
## CONTROL (SIDE:B)



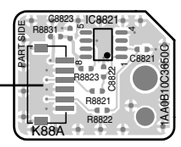

## POWER (SIDE:A)




## LAMP BALLAST (SIDE:A)

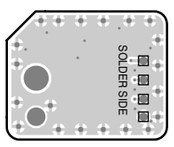



## SENSOR (SIDE:A)

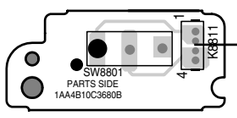



MAIN "K8H"

## SENSOR (SIDE:B)




## SW (SIDE:A)




MAIN "K48L"

## SW (SIDE:B)